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Emotions in e-Learning:
The Review Promotes Advanced Curriculum by Studying Social Interaction

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Abstract

This study presents, for the first time, (a) the analysis of the modern literature on the reciprocal impact of emotional arousal and interactional synchrony that creates the synergy of this tandem increasing group productivity; (b) the empirical results of 10 online experiments with 41 dyads. These online experiments in different languages found a 54% increase in group productivity (41% above chance, the *p*-value < 0.001). The research question of the study is to understand why individuals look for synchrony. A highlight of the article is the hypothesis about the emergence of coherence of emotional arousal and interactional synchrony, the outcome of which enhances group performance. This Model of Coherent Intelligence is supported by laws of Physics and arguments of Social Sciences which are strictly based on experimental data in the modern literature. The study proposes directions for improving e-learning, using Coherent Intelligence.

Keywords: E-learning, arousal, coherent intelligence, interactional synchrony, social cognition

Introduction

The impact of new technologies on changes in society encourages the development of e-learning methods. Moreover, the growing field of knowledge and its multicultural environment demand the development an advanced curriculum in order to facilitate education. These challenges require the improvement of social interaction in e-learning. There is growing evidence of the effectiveness of coordinated interaction in mothers and infants through unintentional mirroring: social entrainment (Aschoff, 1963; Grandin et al., 2006), early imitation (Meltzoff & Moore, 1977; Danilov, in press) and interactional synchrony (Condon & Ogston, 1967; Markova et al., 2019). An impact of arousal on a group performance is also well studied (e.g., Hebb, 1955; Miller et al., 2007; Cirelli et al., 2019). It is widely argued that temporal coordination with co-species contributes to cognitive development of individuals and social cognition, appearing in a wide range of research from different approaches that study: inter-brain neural synchronization (e.g., Valencia & Froese; 2020) and interactional synchrony. There are many different terms and definitions of the latter concept which are also presented in the literature. For instance, another version of the term – interpersonal synchrony – defines the phenomenon as the cases when the movements of two or more people overlap in time (Rennung & Göritz, 2016). Another one suggests: 'Behavioural synchrony complements imitation during interindividual interaction by providing a temporal coherence between the interacting partners (Dumas G, et al., 2011, p.2).' According to Mogan et al. (2017), synchrony is the rhythmic matching of actions both in time and in phase with another person. Markova et al. (2019) highlighted the devision of the phenomena between concurrent synchrony (e.g., joint action, mutual gaze, mirroring) and sequential synchrony (e.g., turn-taking, reciprocity, imitation). The importance of stability and universality of the term and its definition for studying of the phenomenon is obvious due to the several arguments, while the analysis of the problem from semantical and hermeneutical approaches is not a focus of the current article. At the same time, it is important to highlight that the term establishes the main research question to study the phenomena. The wide range of terms of this phenomenon can mean both that its appearance in social reality is more universal and widespread than our knowledge of it and our understanding its contribution to social reality; and/or there are various phenomena of temporal coordination, and not just one that science attempts to describe, meaning only one – we sometimes find what we are able to understand but not what we can find. For instance, Dobbins & Grossmann, 2018 conducted experiments in which participants had to describe objects that rotated ambiguously in depth, i.e., the testees did not see these objects well enough to understand their movement. The subjects described this movement as synchronous although in reality this was not the case. The interpretation of these results can be at least twofold. Our brains are always trying to find synchronicity in the movements of objects, probably because: (a) evolution advantages for survival demand predicting social reality (Prochazkova & Kret, 2017; Adolphs, 2001), therefore our brains extract patterns of information that provide predictions, temporal coordination of movements is more predictable – in this way the brain tries to make it easier for itself; and/or (b) cognitive development and social cognition require individuals to link with relatives (and/or mates) and coordinate with them in order to distribute knowledge (and/or improve collaboration), ensuring ongoing development which is also an evolutionary advantage for survival. Therefore the current study investigates why individuals should be temporally coordinated with others.

This intriguing question can also be applied to learning. Understanding the efficiency of adult learning encounters challenges: (a) to distinguish previous experience on this topic from a new one, the results of experiment should be based on the solving experimental task, and not on recalling something acquired by subjects at the past; and (b) to exclude any association of materials from the research design and experimental environment during experiment that can link the experimental task with participants' memory on other topics, creating new knowledge on the topic of the experiment. Consequently, the efficiency of learning – in particular retention and all possible modalities of social interaction – can be better studied in experiments on initial learning in infants. According to the Model of Hierarchical Complexity (Commons, 2016), in initial stages of development (0-3 Stages refer to the period for infants from birth to about 3 months of age) organisms are not able to maintain communication, because it arises from the exchange of symbols, while abstract thinking appears at later stages.

Therefore in specific, the research question is twofold: First, the article observes the literature on newborns and 3-month-old infants for (i) discussing the factors of interactional synchrony; (ii) detecting or refuting the coherence of arousal and interactional synchrony, and their impact on improving group performance; (iii) proposing a hypothesis of the mechanism of the emergence of coherence of emotional arousal and synchronous unintentional movements, that contributes to social cognition. Second, the study conducts online experiment with dyads in order to verify the hypothesis.

Features of interactional synchrony

Condon and Ogston (1967) introduced two terms of temporal coordination. They defined self-synchrony as ‘the body dances in time with speech (Condon and Ogston, 1967, p.225)’, which means ‘a precise correlation between the changes of body motion and the articulated patterns of the speech stream (p. 227)’. The next term they introduced was interactional synchrony which is ‘share patterns of bodily changes in a precise harmony with the mother as she spoke (p. 229)’. That is, ‘the body of the speaker was found to ‘dance’ synchronously with the articulatory segmentation of his speech. Further, the body of the listener was found to ‘dance’ synchronously with the speaker, primarily up to and including word length segments (p. 234).’ This may mean that interactional synchrony does not imply only similarity of movements. According to Kendon (1970) one of the main conditions of interactional synchrony arousal and its function in interaction is that when listener synchronizes with the speaker, this individual demonstrates his ability to anticipate the speaker’s thought. This feedback to the speaker smoothens the running of the conversation (Kendon, 1970). Therefore, the main features of this phenomenon of interactional synchrony introduced by Condon and Ogston (1967) and further studied by other researchers are: (1) the property of subjects: familiar individuals from four-year-olds; (2) the property of the environment: the phenomenon occurs in a conversation during an event, which is a cyclical routine for all participants; (3) the property of social interaction: a purpose and meaning of the collaboration are shared among participants; (4) property of stimuli: social interaction establishes an interpersonal rhythm. The outcome of interactional synchrony is social dynamics through a common rhythm of social interaction of different modalities.

Features of emotional arousal

Emotional arousal is a tendency to take mental states of others, or to automatically synchronize expressions (Hatfield et al., 1993), it is sharing emotion without self- awareness (Decety & Jackson, 2004). The rapid spread of an emotion from one or a few individuals to others (APA Dictionary of psychology, n.d.). It operates automatically (Heyes, 2018), occurs from birth without understanding social reality (Danilov & Mihailova, in press).

The main features of the emergence of arousal are (1) the property of subjects: familiar individuals; (2) the property of the environment: the phenomenon occurs during social interaction under supranormal stimuli; (3) the property of social interaction: a purpose and meaning of the encounter are shared among participants; (4) property of stimuli: supranormal stimuli are operationalized by supranormal situation, e.g., new environment, new social reality, new tasks and so on.

Method

At the first step, the article investigates the research question by observing the modern literature. The studies were chosen for the review because they show empirical data on (a) group outcome in experiments on: memory retention and interactional synchrony, as well as on facial recognition, word categorization and a phenomenon of reaction to the crying of another newborn in newborns and 3- to 4-month-old infants; (b) interpersonal neural synchronization during teamwork experiments, if their baseline also represents neural dynamics of individuals solving the same task, but alone.

There are several assumptions of choosing articles for the review:

(1) Mother-infant dyads very often pass to the state of interactional synchrony because of supranormal stimuli. Social entrainment provides a timing cue for a biological rhythm. This notion was also applied to humans capacity to become entrained with one another or with an external stimulus (Aschoff, 1963). The social entrainment refers to a coordinated state between two individuals that results when their behavior is coordinated by social zeitgebers (time-giver) during cyclical daily rhythm (Grandin et al., 2006). The infant's social entrainment to the mother helps this organism maintain an adaptive relationship with the environment (Olds & William, 2015). These organisms are in the state of social entrainment from birth, and can pass to interactional synchrony as fast as supranormal environment demands them.

(2) 3- to 4-month-old infants were emotionally excited during the experiments if these experiments were carried out in laboratories, regardless of whether the studies have registered arousal or not. The growing body of literature shows the effect of arousal on behavior and performance. It is widely argued that autonomic arousal affects heart rate, pupil dilation, and galvanic skin response, which are used to detect arousal in subjects (Wang et al., 2018). There is limitation of all these measurement approaches – the baseline of many experiments already contains of increased arousal. Because the measurement of the baseline in many experiments were registered in the laboratory before the test, which was already supranormal stimulus for infants. Therefore some experiments with infants were carried out under "preliminary" emotional arousal of participants, although it is obvious that this does not exclude their results because the arousal in the baseline (before the experiments) should be less than when solving tasks. The important conclusion for the current study is that during the experiments in laboratories, the subjects were under emotional arousal. Many others studies on infant performances did not consider arousal as a research variable while its emergence was also very likely due to supranormal stimuli during the experiments.

(3) The review observes articles about experiments in which dyads stood under supranormal environment – in laboratories with strangers.

Therefore, considering above mentioned assumptions, the current review also included articles in which arousal and interactional synchrony were not recorded, mentioning that they in any case appeared to some extent. At the second step, the study discusses the results of 10 online experiment conducted with 41 dyads.

Findings

Evidence of facial recognition and word categorization in infants

The growing empirical evidence from studies of the last 50 years presents interesting facts about the achievements of newborns and infants in face recognition. The recent article about social behavior in infants (Danilov, 2020c) observed the 18 experiments of other researchers on facial mimicry and word categorization in infants and highlighted:

(i) Newborn tracked a moving schematic face with a strong preference for the face patterns over the other stimuli (Goren et al., 1975; Johnson et al., 1991);

(ii) Newborns demonstrated preference for their mother's face over a stranger's face (Bushnell et al., 1989; Bushnell et al., 2001; Field et al., 1984; Pascalis et al., 1995);
(iii) Newborns prefer faces from their own-ethnic group (Kelly et al., 2007; Pascalis et al., 1994);
(iv) Preferences of infants depend on their caregivers (Quinn et al., 2002);
(v) 3-month-old infants prefer the natural composition of inner features of faces rather than the same features, but in an unnatural position (Turati et al., 2004);
(vi) Newborns recognize familiar faces even presented partly (Simion et al., 2007);
(vii) Newborns prefer attractive faces (Quinn et al., 2008);
(viii) The 3- to 4-months-old infants prefer attractive faces of cats (Quinn et al., 2008);
(ix) The 6- to 9-months-old infants recognize race even through observing grayscale faces in black-and-white photographs (Anzures et al., 2011);
(x) The 3-months-old infants from cross-race environment did not show Other Race Effect (Bar-Haim et al., 2006; Gaither et al., 2012);
(xi) The 3- to 4-months-old infants already can categorize words – fishes and dinosaurs from different classes – that do not fit into their personal reality (Ferry et al., 2010; Perszyk & Waxman, 2019).

Evidence of newborns reaction to the crying of another newborn

According to Danilov and Mihailova (in press), growing empirical evidence suggests (xii) a newborn's reaction to the crying of another newborn (Dondi et al., 1999; Martin & Clark 1982; Sagi & Hoffman 1976; Simner 1971). They responded more often to another infant's cry than to a variety of controlled stimuli, including white noises, synthetic cry sounds, silence, non-human cry sounds, and their own cry (Dondi et al., 1999; Martin & Clark 1982; Sagi & Hoffman 1976; Simner 1971). Geangu et al. (2010) show that during the presentation of a pain cry sound, 1- and 3-month-old infants manifest increased vocal and facial expressions of distress.

Evidence of infants achievements in learning

The modern literature shows very few studies which explored learning of very young infants. Their review presents another interesting fact (xiii): In the behavior synchrony state of Mother-infant dyads, 3-month-old infants demonstrated both an improved learning and increased short-term memory (Thompson & Trevathan, 2008; Morrongiello et al., 2003).

Evidence of interpersonal neural synchronization during teamwork experiments

The recent review of studies on the association between neural oscillations and functional integration (synchronization) by Valencia and Froese (2020) reveals two interesting facts of interpersonal neural coordination:

(xiv) An anomalous synergy of neural coordination in group collaboration – a greater interpersonal neural coordination in subjects solving a puzzle together, compared individual work on the identical task, but alone (Fishburn et al., 2018) – shows the cooperation of the participants, which cannot be explained by their perceptual interaction.

(xv) The similar effect was revealed between two individuals when singing together, but not when singing individually yet close to each other (this effect was not observed in random pairs) (Osaka et al. 2015).

The Model of Coherent Intelligence (MCI) proposes below a hypothesis on the physical mechanism of such a synergy.

Discussion

These facts were obtained from experiments where (1) the property of subjects: familiar individuals with infant from birth to 4-month-olds; (2) the property of the environment: supranormal stimuli of unusual situation for dyads which could involve them in social entrainment; (3) the property of social interaction: a purpose and meaning of the collaboration were shared among caregivers and infants; (4) property of stimuli: social interaction of different modalities. These factors are very similar to those that establish and stimulate separately both arousal and interactional synchrony, and even in studies where these variables were not taken into account by researchers, it is likely that both arousal and interactional synchrony arose there. Obviously, the participants were in the emotional arousal state due to supranormal situation for them. Interactional synchrony and arousal accompany the everyday life of dyads, because they are already connected through a state of social entrainment from birth, as mentioned above, which promotes easy passing to their co-arousal and temporal coordination in any supranormal environment. This ability is manifested in daily routine when infants mirroring sounds and body movements, the frequency of which is correlated with frequency of their mothers (Markodimitraki and Kalpidou, 2019; Heyes, 2020).

There is another argument in supporting the supposition that interactional synchrony and arousal contribute to outcomes in laboratories, even their appearance was not recorded. Studies of infants behavior in natural environment do not support laboratory results. The very few studies were conducted on infants behavior in a naturally occurring context in their homes. The results of these studies show that in a natural environment newborns do not play an active role in face-to-face communication with the mother in the 1st month, and only from around the beginning or the middle of the 2nd month the mothers started to mark these communicative infant actions (e.g., Lavelli & Fogel, 2002; Kugiumutzakis, 1999; Trevarthen, 1998; Reddy et al., 1997). This means that during experiments, newborns manifested unusual behavior for them in comparison to their own behavior under natural conditions at home.

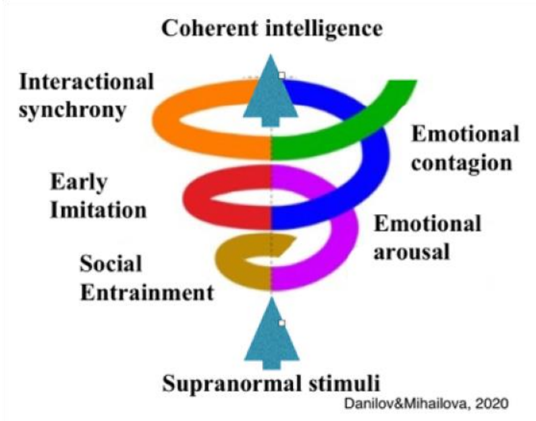
Therefore supranormal stimuli of experimental performance in laboratories could stimulate interactional synchrony and arousal in dyads. Taking also into account above evidence of the behavior of children in natural environment, this tandem should be taken into account when discussing outcome of the experiments in laboratories. Interesting facts (facts from i to xiii) of infant cognitive enhancement can be explained if they can be revised to account for the likely interactive synchronicity and arousal during experiments in dyads. It is obvious that the above achievements of very young children do not correspond to the stage of their development, given also their lack of communication skills. Young infants do not understand the meaning of social reality on their own in such an extent to successfully classify social phenomena that are abstract and/or absent from their reality. At stage 3 of development organisms are neither able to perceive abstract phenomena nor maintain communication, because abstract thinking appears at later stages.

The Model of Coherent Intelligence (MCI)

The above facts and arguments allow us to put forward the hypothesis about the emergence of coherence of emotional arousal and interactional synchrony, the outcome of which enhances group performance. In the laboratory experiments this helps infants solve insoluble tasks for them. The MCI shows that ongoing social dynamics creates a coherent mental process in groups where coordination of movements is cyclically enhanced under ever-growing arousal. A supranormal environmental case – e.g., first hours after birth – stimulates supranormal sensation in dyads. This can push the inherited mechanism of social entrainment of infants to the rhythm of the mother. Both the supranormal sensation and social entrainment may stimulate the common emotional arousal. The latter is increased by the ongoing supranormal sensation and the occurring rhythm of arbitrary movements of the infant. The continuing supranormal sensation and ever-increasing arousal of the infant and the mother along with the rhythm of the infant's unintentional movements stimulate early imitation and emotional contagion. The problem is how the infant capture and reproduce the kinematic of movements. The MCI proposes that common emotional arousal together with the identical rhythm create coherent mental processes in dyads – Coherent Intelligence (see Picture 1). At Stage 3 of the Model of Hierarchical Complexity (Commons et al., 1982; Commons, 2016) organisms do not maintain bilateral communication. According to Danilov and Mihailova (in press) individuals are able to communicate at this Stage by distinguishing perceptual signals of identical modality by their value (significance). This ability to imply different values to identical perceptual stimuli, can contribute to ostensive cues. This meaningless interaction after all modifies into communication, when individuals imbue perceptual impulses with mutually implied meanings, cascading their signals in response to the history of relations between them.

A coherent mental process (e.g., during cooperation in problem solving or choral singing) emerges when neural circuits of different organisms are associated through connected neurons. That is, this coherence is possible if their neurons can be linked by an entanglement state based on the laws of physics – non-perceptual interaction among individuals. This connection of neurons can associate neural circuits of different organisms, supporting their cooperation in mental process – coherent intelligence (Danilov et al., 2019). Knowledge on consciousness is being developed through the study of the interaction of neurons, which definitely obey laws of physics. The growing empirical data in physics evidently show that quantum entanglement occurs when two particles become linked and behave the same, regardless of the distance between them. Recent research show that living cells can also become entangled (Marletto et al., 2018). Evidence for increased interpersonal neural synchronization due to collaboration in team work experiments (facts xiv and xv) probably supports the hypothesis of coherent intelligence.

Picture 1. The Model of Coherent Intelligence



Results, Conclusions and Recommendations

The above arguments show that one of the possible explanation of the infants achievements in laboratory experiments is a mental collaboration with their mother (caregivers) supported by non-perceptual social interaction – coherent intelligence. This conclusion is also supported by interpretation of evidence from studies on the association between neural oscillations and functional integration (facts xiv and xv). The current study on coherent intelligence in mother-infant dyads presents, for the first time, empirical evidence of coherent intelligence in dyads in 10 online experiments with 41 groups (41 Mothers and 45 children, M=9). These online experiments in different languages found a 54% increase in a group performance (41% increase above chance, the p-value < 0.001). These results support the MCI, which demonstrates the mutual influence of emotional arousal and interactional synchrony, that improves group performance.

Future work

This study shows the flexibility and potential of the phenomenon of Coherent Intelligence in e-learning. It is widely believed that one of the main weaknesses of e-learning is the lack of face-to-face interaction and shortage of input from trainers, that is, there is no substitute for interacting with, and learning from, a fellow human. The Problem-Based Learning curriculum also requires confident involvement in its process of high-order thinking with deep levels of information processing to achieve success (Danilov, 2020). We believe that the findings of the current article open up a new approach to understanding the impact of social interaction and help create an innovative e-learning curriculum that could incorporate higher-order thinking with deeper levels of information processing to facilitate knowledge acquisition, achieving richer memory structures in students during e-learning. The article also proposes a new approach to study the initial comprehension of social reality among young infants largely occurs within the framework of non-perceptual social interaction with their caregivers, and emotional contagion, that makes a contribution to the formation of social reality.

Plagiarism Rate of the Paper = 3%

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The Non-standard Task for Gifted Pupils in a Common Primary Mathematics Teaching Situations

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Abstract
Non-standard tasks encourage solvers to actively and creatively work, are unusual for them, and their solution does not depend on known algorithms. It is not easy to define which non-standard tasks are suitable only for working with gifted pupils and which can also be used effectively in common mathematics lessons. The paper aimed to analyze the solution of a selected non-standard task designed for gifted pupils in the environment of common mathematics teaching and to gain reflection by future mathematics teachers. A mixed research design was chosen - in the qualitative part, 16 practical teachers were involved in the analysis of pupil solutions, and in the quantitative research were 26 prospective teachers asked to evaluate the chosen tasks. It turned out that the task was for most students slightly difficult, although, the participating teachers evaluated its implementation as very beneficial both from the perspective of pupils and for their teaching.
Keywords: Non-standard task, gifted pupils, mathematics teaching, teachers

Introduction

Different authors define non-standard tasks differently. Non-standard tasks invite solvers to active and creative work. The solution does not depend on the known algorithms and, therefore, non-standard tasks are more beneficial and conducive than common tasks. Pupils are not accustomed to non-standard tasks and the novelty is their important characteristic feature (Lišková, Rezek, 2015; Nováková, 2016; Budínová et al., 2016).
As for their context, non-standard tasks are not limited in any way; the form of an assignment may also vary. We may use verbal instruction, pictures or other alternative forms. There will probably prevail tasks involving creative approach, however, they may not be too demanding with regard to cognitive abilities of a solver. Subjectively, non-standard tasks may appear more demanding than commonly used tasks (Surá, 2020).

A teacher can use non-standard tasks as a tool to identify mathematically gifted pupils. From the pedagogical viewpoint, it is very important to distinguish smart and talented pupils. However, in the process a teacher may be influenced by the characteristics corresponding rather to an apt, smart pupil. Both gifted and smart pupils have their specific educational needs and, therefore, require different educational approaches, stimuli and materials corresponding to their cognitive abilities and knowledge (Portešová, 2014). In mathematics teaching stimulation of higher cognitive functions through mathematic tasks, non-standard tasks in particular, is considered one of the most important tools.

In the Czech Republic non-standard tasks of FEP BE (Framework Educational Programme for Basic Education, 2017) belong to "Non-standard application tasks and problems", and four categories of non-standard tasks are defined: verbal tasks, numerical and picture series, magic squares, and spatial ability. A separate group is formed by verbal non-standard tasks – they unify a non-standard character and verbal instruction (verbal formulation) of a task. This article works with a verbal non-standard task with only verbal instruction and eventual mathematical symbols in the text (without any drawings, pictures or aids) the solution of which resembles that of verbal tasks. With regard to the shared characteristic features of non-standard and verbal tasks, we can expect similar ways of solving the task.

In our work we aimed to answer the following questions: *What strategies in solving a non-standard task intended for gifted pupils are chosen by pupils in common classrooms? What is the rate of their success? How do future teachers see adopting a non-standard task for gifted pupils in common mathematics teaching*?

Method

The research was carried out in the academic year 2019/2020 in the form of a mixed design. The sample included 21 part-time students (PTS) in the qualitative part, and 26 full-time students (FTS) in the quantitave part, of the Faculty of Education, Palacký University Olomouc. The same task intended for gifted pupils of the age of 9 was used in both parts of the research.

Task (Zelendová, 2017, pp.10-11): *In a ZOO they need to place animals in cages. The ZOO owns 15 lions, 13 lionesses, 11 wolves, 20 she-wolves, 42 deer stags, 23 deer does, and disposes of 5 cages. Nevertheless, it is known that:*

- *The number of meat-eaters must not be higher than the number of plant-eaters in any cage.Unceasingly hungry meat-eaters would band together against the plant-eaters and would feast on them.*
- *There must not be two groups of different carnivora species with different number of members in any cage. If there are two groups of meat-eaters and one of them has more members, the larger group attacks the smaller one.*
- *The number of males and females in one cage must be identical, or there may be members of the same sex only in a cage, so that each of them has their opposite, and none is without a mate.*
- *One cage at least must be inhabited by plant-eaters only and one cage at least by meat-eaters.*

Problem 1: *Is it possible to place the animals into 5 cages and match all 4 conditions at the same time?*[1]

Problem 2: *Public health authority (hygienics) restricted the capacity of each cage to 30 animals and on the same day there were transported more 4 she-wolves and 10 koalas (6 males and 4 females) to the ZOO. Can we place the animals into 5 cages so that we match all 4 conditions and restrictions put by the public health authority?*[2]

In the qualitative part the respondents were asked to carry out a methodological analysis of pupils´ solutions of the task. The method of text analysis was applied (Braun, Clarke, 2014). In the quantitative part the respondents were asked to solve the task first, and then to evaluate it using an on-line questionnaire. The questionnaire was anonymous and included five items.

The following research questions were defined prior to an analysis of the results of qualitative part of the research:

(RQ1) *Which strategies do PTS respondents cite as used by common pupils in solving non-standard tasks intended for gifted pupils?*
(RQ2) *How do PTS respondents assess their success rate at solving the tasks?*

The following research questions were defined prior to an analysis of the results in quantitative part of the research:

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[1] **Solution of Problem 1:** Animals can be placed in five cages e.g. like this: 1st cage – 23 stags and 23 does, 2nd cage – 19 stags and 9 she-wolves, 3rd cage – 11 wolves and 11 she-wolves, 4th cage – 13 lions and 13 lionesses, 5th cage – 2 lions

[2] **Solution of Problem 2**: After altered conditions, animals can be placed in five cages e.g. like this: 1st cage – 4 couples of koalas and 19 stags, 2nd cage – 13 lionesses, 8 couples stag-doe, and 1 koala (male), 3rd cage – 11 wolves and 8 couples of stag-doe, 4th cage – 7 couples of stag-doe and 1 koala (male), 5th cage – 24 she-wolves

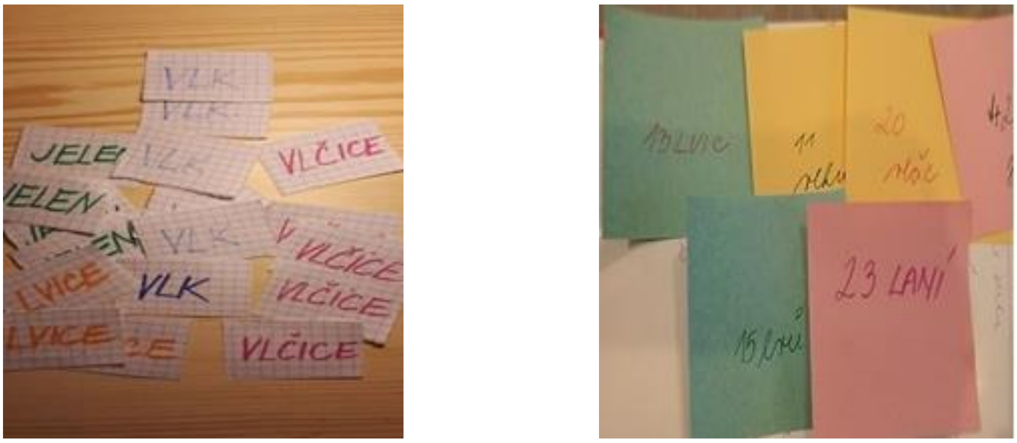
(RQ3) *What was the success rate of the task solution by FTS respondents?*
(RQ4) *What kind of solution was most frequently used by FTS respondents?*
(RQ5) *How do FTS respondents assess the task in terms of its difficulty?*
(RQ6) *How do FTS respondents assess introduction of the task intended for gifted pupils in common lessons of mathematics?*

Findings

The aim of the qualitative part was to analyze pupils´ solution of the task. The analysis was performed by PTS respondents. We did not aim to get quantitative data, but a qualitative assessment of strategies used by pupils and their success rate. Three sub-categories were created.

The first category was the **task difficulty**. Majority of respondents agreed that this type of non-standard tasks is very difficult for common pupils. A number of children had difficulty understanding the problem, they did not understand what they were required to do, they were confused with the amount of information, and restrictions. In general, the pupils had problems to control the conditions to be met. There were relatively many conditions so the pupils often re-read the instructions. The task solving took 40 minutes on average. However, the pupils were able to solve only Problem 1. Individuals with specific education problems had difficulty understanding the instructions at all, some were not able to read the instructions and comprehend the task. Some pupils, on the other hand, enjoyed the task even if they did not arrive at the correct solution.

Figure 1. An example of manipulative solution



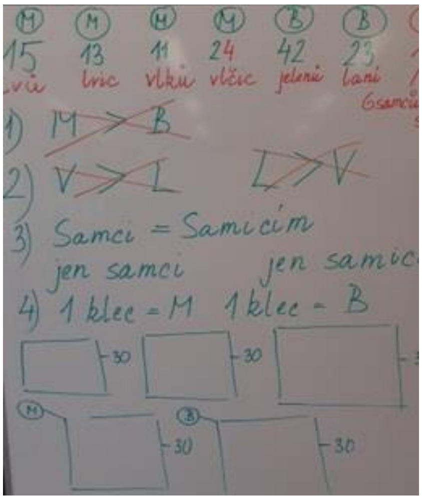
The second category was **pupils´ succes rate** in solving the task. In general, we can sum up that the success rate was very low in all groups of pupils (e.g. 15%, 13 % etc.). Some pupils adopted correct methods but did not meet all conditions. A number of pupils arrived at the correct solution only after their teacher helped them – analyzed the task and suggested possible solutions, provided graphic representation. A very low succes rate was recorded for Problem 2.

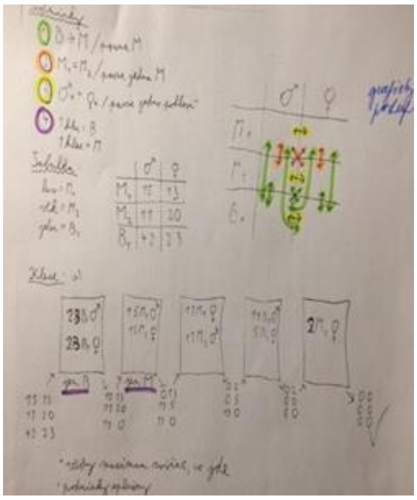
The third (key) category comprised adopted **pupils´ solution strategies.** The solution procedure was similar in most pupils – they made clear which animal belongs to meat-eaters and which to plant-eaters. They drew the cages, and then they reasoned, categorized, excluded, errased and calculated how many animals were still left. We identified the following solution strategies (the task correct solution at the end of the text):

Solution No. 1 – Manipulative activity

Pupils created cards with pictures of individual animals (or they used bowls and marbles representing cages and animals) and tried to match them according to the instructions. The method is rather time demanding, however, matching animals in cages was relatively fast, reliable and illustrative. An example of the manipulative activity is in Fig. 1.

Figure 2. An example of systematic experimentation

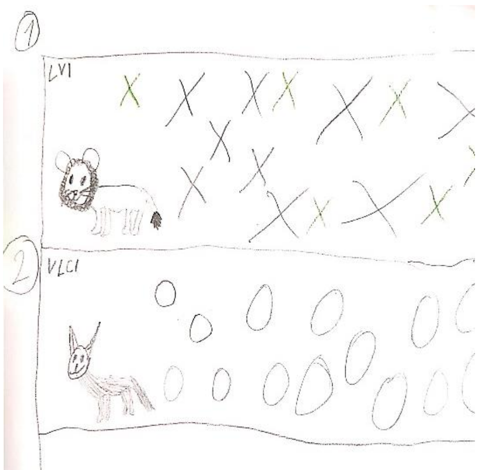


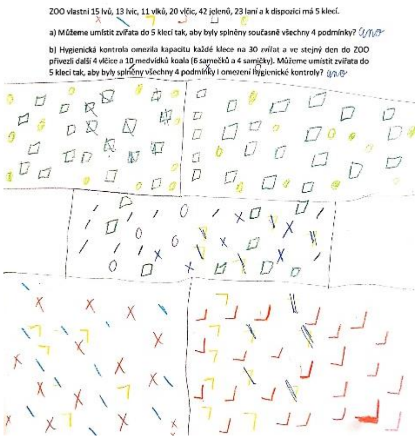


Solution No. 2 – Systematic experimentation

Some pupils chose trial and error method or systematic experimentation. They tried to put different combinations of animals in cages which eventually led to the required result. During the procedure it was necessary to continually check the task conditions (Fig.2)

Figure 3. An example of graphic solution





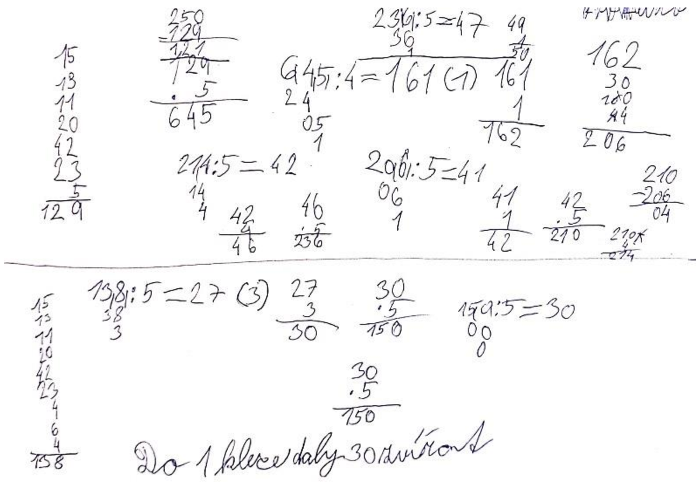
Solution No. 3 – Graphic solution

Most pupils decided for this method. First they drew and put down the task conditiions, and then they calculated and matched individual animals in cages.

Solution No. 4 – Arithmetic solution

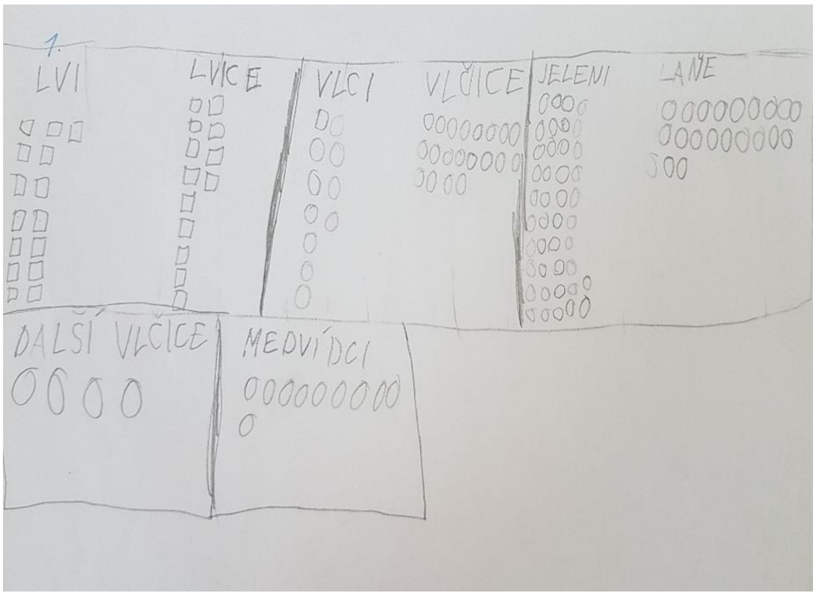
In this case pupils tried to solve the task using arithmetic calculations only . Though this method was not applied as often as graphic solution or systematic experimentation, it also led to the intended result (Fig.4).

Figure 4. An example of arithmetic solution



Solution No. 5 – Plotting into chart

Figure 5. An example of chart plotting



This one was a relatively frequent approach – pupils combined the chart with graphic solution. Most pupils prepared the chart representing cages and then put individual animals into the cages (Fig.5).

In the processing of quantitative part of the questionnaire, three items were analyzed:

1. Did you succeed in solving the task?
2. Do you think the task is difficult for common 9-year old pupils?
3. Would you use the task in the common primary school mathematics lessons?

Chart 1. Success rate – FTS respondents

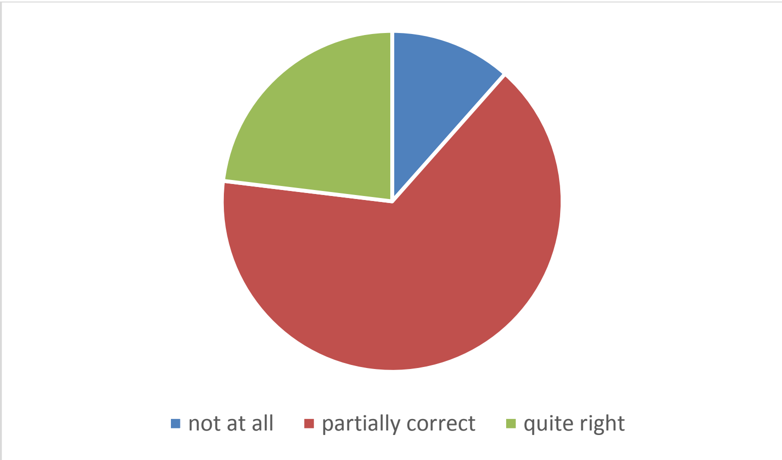


Chart 1 shows that FTS respondents were not always successful in the task solution. Only 23.07% of respondents replied they always solved the task perfectly, 65.38% reported partially correct result, and 11.54% failed to solve the task.

Chart 2. Quantitative part of the research - results

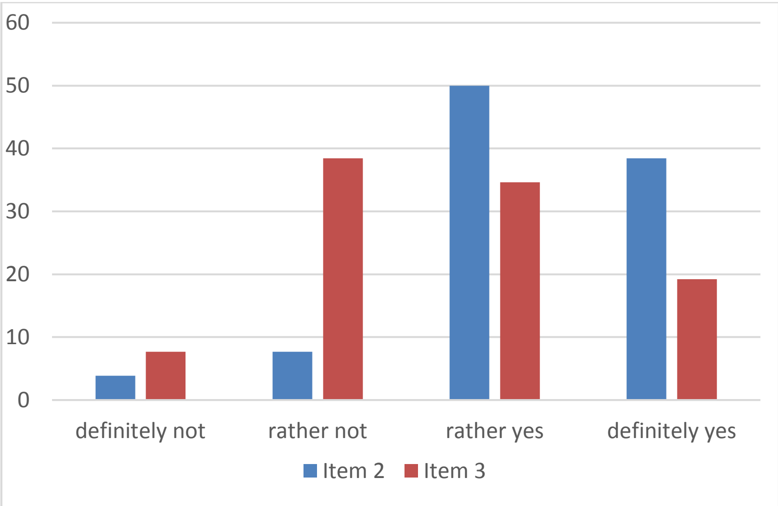


Chart 2 shows that 88.46% of respondents believe the task is too difficult for common pupils, however, 53.84% of respondents would include the task into primary school mathematics lessons.

Results, Conclusions and Recommendations

The research showed that pupils` problems include not only poor numerical but also reading literacy. A number of children cannot read with comprehension and, therefore, they are not able to arrive at a correct solution when doing more complex tasks. After some pupils understood the task instructions they faced another problem –

finding the rules and only one correct answer. Pupils are used to be constantly reassured that they understand correctly the instructions and that their method is correct. Such pupils are not able to work with an error, and want to find systematic character in these types of tasks. These tasks are not a part of standard mathematics, and therefore, neither common pupils, nor future teachers are prepared to deal with them. One of the ways to change this situation is to introduce non-standard verbal tasks in lessons of primary school mathematics and in education of future teachers.

Acknowledgements

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Plagiarism Rate = Referenced (1,00%), Plagiarism (7,00%)

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Insert Module of Corporate Social Responsibility and Ethics in Business Studies Curriculum

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Abstract

The purpose of the current research is to investigate Latvian business school professors' attitude to teaching business ethics and work out proposals for development of the Business Ethics insert module for the Latvian business schools. The research employs a quantitative research design – a survey of, applying 5-point Likert scale questionnaire. The research sample consists of 174 higher education institution professors (purposive non-probability sampling). Two research questions are put forward. Q1: Do lecturers see that knowledge of Ethics can foster their students prospective careers? Q2: Should Ethics be taught as an independent course or as an insert module? Although there is no unanimous agreement among lecturers regarding the role Ethics play in students' professional lives, the research shows that majority of respondents think that this type of knowledge is necessary. The respondents admit that a productive form of Ethics instruction is an multi-valent insert module that can be adapted to tasks of their respective courses.

Keywords: Business Ethics, Business Environment, Competitiveness, Ethics education, Insert Module

Introduction

Businesses today have to juggle between the need to survive due to increased competition and the pressure to become socially and environmentally responsible business entity, as well as to conduct an ethically sound procedures within and outside an organization. At the same time ever more actual there becomes a question of CSR and Ethics education among business students as they will be a leading force in future economy. In this regard attitudes and opinions, as well as education approaches of students and lecturers are of an equal significance. Education must find ways of responding to such challenges, taking into account multiple worldviews and alternative knowledge systems, as well as new frontiers in science and technology such as the advances in neurosciences and the developments in digital technology. Rethinking the purpose of education and the organization of learning has never been more urgent (UNESCO, 2015). Of course, the education alone can't be a panacea to all illnesses and mishaps of the contemporary society still the demanding and more and more complicated nature of economic environment calls for well-educated and socially responsible professionals. Education represents a key component of adaptive capacity, as the knowledge, skills and behaviours necessary to adapt lives and livelihoods to the ecological, social and economic realities of a changing environment must be transmitted to the present and next generations. There has been a massive research in the topic of ethics education (as well as CSR and sustainability education) within the last two decades that demonstrates, first, the urgency of the problem within the fast changing economic, social and cultural environment, second, the generational changes (generation Y – the millennials with their unique set of mind), and, third, technology advancements (digital tools, online courses, etc., that require the whole new teaching skills from university and business school professors).

Approaches to teaching business ethics and CSR in the higher education establishments can be divided in two broad groups – the integrative approach and the stand-alone ethics (or CSR, or sustainability) course approach.

The integrative approach (Rasche et al., 2013; Acevedo, 2013; Tello et al., 2013; Cornelius et al., 2007; Rajeev, 2012; Baetz, 2012) presupposes that ethical issues should be essentially integrated within various subjects in a targeted manner (in accordance to industry needs, for example), it presupposes also adding the philosophical reasoning to every-day case studies and analyses (Prado et al., 2020)

The second approach, in contrary to the integrative stance, stresses the importance of the stand-alone business ethics course according to the level and/or year of instruction – the experience based education, with aim to create self-awareness for bachelor students, or a course drawing back on the previous learning and work experience for master students (Felton & Sims, 2005; Sims & Felton, 2006). The stand-alone ethics or CSR course is being advocated also by Gioia (2002), Tormo-Carbo and others (2016).

Despite the quite polarised views featured above, there exists also the third way – development of the micro-insert module compatible with a wide variety of business courses (from management to human resource development and accounting). We would like to single out especially two publication entitled "Teaching Business Ethics Through Strategically Inserted Micro-insertions" (Slocum *et al.*, 2014) and "Ethics in the Details: Communicating Engineering Ethics via Micro-Insertion" (Riley *et al.*, 2009). The authors stress the importance of the micro-insertions that are defined as ''small scale insertions of ethics instructions'' throughout a course, producing a larger number of ethics mini-lessons during a semester. In other words, particular themes are developed and delivered by the ethics professor or by the guest lecturer amidst the rest of the themes as a workshop, a seminar, a lecture, a class activity, etc. The micro-insertion offers a way to communicate ethics using a "low-dose" approach. In our opinion, the micro module of negotiation ethics is a promising way of engaging students in discussions of ethical issues, especially in case if the university does not offer a specialized course for whatever reason (economical, cultural, methodological, etc.). The module could be a multivalent entity with a high degree of compatibility, that requires the use of different teaching and evaluation techniques according to the subject in which the module is being inserted into, as well as professors' flexibility. Namely, the lecturer should be able to teach the same topic in the adapted way in close cooperation with the lecturer in charge of the particular subject, it requires a great deal of coordination, but results could be students' higher awareness of ethical aspects in business practices and the role of social responsibility in ensuring business competitiveness. Though the question can arise: is there any substantial difference between the integrated approach and the use of the integrated micro-insert modules? In our opinion, the difference lies in the fact that the insert micro-module is the somewhat enclosed entity – a short courses with particular structure: a set of lectures, practical works and evaluation tests. The test (or any practical task) result is an integral part of the final mark to be taken into account compulsory.

In order to work out the model some previous knowledge about students' and lecturers' attitude towards business ethics and corporate social responsibility is necessary. Here we can mention the research done by Matten and Moon (2004) - a survey regarding CSR education (teaching and research) in Europe. The main objective of the survey was identification of the effort the business schools were making in incorporation the social responsibility course into their curriculum. The authors found that, in general, business schools are trying to find new ways to include business ethics and CSR courses in the curriculum, but that this was a new and yet unproven process. The survey also showed that the most influential persons driving the CSR agenda were particular faculty members. The existing research shows that business students consider ethics teaching as important (Tormo-Carbó et al. 2016; Crane, 2004). At the same time other results are not so univocal (Neureuther et al., 2011); thus, Low and others (2008) came to conclusion that the ethics education didn't leave a significant imprint on students' professional behaviour later in life. The inconclusive results were depicted also by Daudisa and Vevere in the publication "Importance of professional ethics and corporate social responsibility within business studies curriculum within context global economy" (2020). The purpose of the above mentioned investigation was research of the business students' perception of importance of ethics and corporate social responsibility courses within their curriculum and attitude towards ethics depending of the attendance or not attendance of the respective courses. The results demonstrated that there are some differences in the students perception of the importance of CSR and business ethics courses within curriculum, namely, those who had previous experience in ethics education held a slightly higher regard for ethics in business than respondents from the group not having such experience. Still these differences were not as pronounced at it was expected. Looking for explanation of the given fact the authors concluded that there perhaps existed a gap between students' expectations and business school course offers. In other words, the traditional forms of ethics instructions could be outdated. This, in its turn, leaves a room for further development of study forms and approaches, including specially designed modules, innovative teaching methods (combination of on- and offline), and, of course, a practical training. The importance of practical (including ethical) training in business schools is stressed in the literature [17; 18], the authors believe that many business schools have developed in the wrong direction by treating business as solely academic discipline, that has led to the lack of interest on the students' part during the study process (too theoretical) and impossibility to apply knowledge in practice afterwards. Questions (problems and opportunities) regarding inclusion of CSR and ethics within business school curricula either as independent or insertion models have been tackled by Wong, Long, and Elankumaran (2010) and by one of the authors of the present article (Vevere, 2017).

One more aspect of the utmost significance to be taken into account is business school professors' of various subjects attitude towards ethics, corporate social responsibility and sustainability issues for two obvious reasons: first, they are the ones who instil the values and attitudes in the students' minds on the day to day basis; second, they should be able and, the most important, willing to cooperate with ethics professors (that is not always the case, since they can lose some lecture time). In this regard we would like to mention a couple of investigations. Ali and others (2012) found that there was a strong overall motivation among 513 business school professors to incorporate such subject as business ethics in the school curriculum as compulsory subject so that future business executives could exhibit ethical competences. Another research, the qualitative study of 59 professors from four business schools, was carried out by Gottardello and Pamies (2019). They came to conclusions that universities needed to reevaluate the role professors in promoting ethics in education, thus, lecturers' education and ethical training could ensure the implementation of the teaching paradigms according to the changing economical, social and cultural environment.

The purpose of the current research is to investigate Latvian business school professors' attitude to teaching business ethics and work out proposals for development of the Business Ethics insert module.

Q1: Do lecturers see that knowledge of Ethics can foster their students prospective careers?
Q2: Should Ethics be taught as an independent course or as an insert module?

Method

The research was conducted by the means of the quantitative survey among professors (of various subjects) of four Latvian business schools (public and private). Approaching professors involved in MBA and BA studies provided a first-hand account of what social-ethical issues they believed to be of importance, and what teaching mode could be the most appropriate. Professors were approached with the request to be questioned about their opinion during the class through e-mails using a google document format questionnaire. The respondents received all necessary information about the purpose and procedure of the research, as well as their anonymity was guaranteed. The questionnaire was developed based on the literature study; it consisted of 40 items divided into 7 groups. The questionnaire design was a 5-point Likert scale answers varying from "do not agree at all" (value – 1) to "fully agree" (value – 5). The survey included statements (the statements and their mean values are depicted in the findings part of the present article). The first group of statements (altogether 5) was devoted to the purpose of ethics instruction in business schools, such as development of ethically responsible professionals, development of general moral reasoning, ethical attitudes, fostering career and learning ethics theories. The second group of statements consisting of 4 items touched upon the most appropriate instruction form – integrated model, stand-alone ethics course, insert module, and refutation teaching ethics at all. The third group concerned the instruction methods (8 items) – from lectures, seminars, practical assignments to students' independent projects. The fourth block of statements (6 items) were inquiries about teaching resources – from textbooks to scientific articles and statistical reports. The fifth area of investigation was regarding the evaluation methods (6 items); while the sixth (11 items) – the significance of ethics education for students (from raising ethical self-awareness and development of individual value system and critical reasoning skills to conflict management and strategical management). This was followed by the questions regarding if the course of business ethics was taught in their respective universities, reasons for not offering the business ethics course (in case it was being taught). The alpha coefficient for 40 items is 0,793, suggesting that the items have relatively high internal consistency.

Population sampling. Once the research design was established, it was necessary to make a decision about the sampling unit (a unit of population chosen during the sampling process; the unit should contain one or more elements describing the population). Participants of the survey were chosen according to the principle to include business school professors of four Latvian business schools. This procedure can be described as a non-probability purposive sampling, i.e. single stage procedure where sampling unit contains only one element, namely, involvement in the business studies (regardless the level) (Smith & Albaum, 2012). Altogether 174 business school professors were surveyed, all questionnaires were recognized as valid. The descriptive statistics were applied to calculate the arithmetic mean. After that the comparative analysis of the results and was performed.

Findings

The first set of items in the survey was dedicated to business school professors' perception of the purpose of Business Ethics education, in general (see Table 1).

Table 1. Purpose of Business Ethics education

Item	Arithmetic mean
Developing socially responsible professionals	4,24
Development of moral reasoning	3,91
Cultivate ethical attitude towards world	3,89
Learning ethics theories	3,6
Help students make appropriate career choices	3,14

Though there is no high variation among different purpose admissions, still it is important that the highest value, among others, was assigned to the factor of social responsibility that seems quite logical in the light of the contemporary debates regarding sustainable economy and social basis of company/nation competitiveness. Lower mean value , on the other hand, received the item related to the role of ethics education in the matters of students' career advancement. At least partly this can be explained by the fact that, in our opinion, many special subject instructors do not have appropriate (related to the current issues) ethics education themselves. This can be solved by their involvement in study material preparation for ethics classes, joint seminars, field trips and specialized workshops rather than formal lectures and tests (mandatory or not). Still, overall the answers exhibit a positive tendency that can signify lecturers' willingness to learn something outside their direct sphere of expertise.

Taking into account the existing forms of ethics instruction in the business schools in question (stand-alone or integrated courses, or the lack of the subject within the curriculum thereof) it was very important to know professors' opinion about the optimal (in their opinion) mode of teaching (see Table 2).

Table 2. Form of Ethics education

Item	Response rate (%)
Ethics should be taught as stand-alone subject	37,9
Ethical aspects should be integrated in every special subject	29,3

Ethics should be taught as multivalent insert module	27,6
Ethics should not be taught at all	5,2

The answers are almost evenly split about three teaching modes, describes in the literature review, namely – a stand-alone, integrated and insert micro-module modes, only 5,2 per cent of respondents thought that it would be a waste of time to designate 32 (3 credits) or 48 (4 credits) academic hours of teaching time to ethics. If the relatively high numbers regarding first two options is not a surprise, since there are business related programs in certain schools (management, marketing and sales management, finance management, tourism management, etc.) that offer special courses (they can be entitled also as corporate social responsibility, sustainability, or combined ones), but some schools either do not have capacity or willingness to venture in this field – in these cases professors are advised (often on the voluntary basis) to include at least some ethical aspects (this could be a problem, if professors lack knowledge about the latest developments in the field of ethics). But what was a pleasant surprise for the authors – the fact the 27,6 per cent of respondents agreed upon the necessity of the insert module (there has not been anything like that till now, at least in the Latvian business schools). This creates a possibility to work out a test model – flexible in its nature and compatible with a number of other subjects. Supposing we agreed on the insert model (at first in the test regiment), then the next step would be reaching some consensus regarding the instruction methods. Hence the next set of items in the survey (see Table 3).

Table 3. Methods of Ethics instruction

Item	Arithmetic mean
Group discussions	4,29
Case studies	4,28
Students' independent projects	4,28
Practical tasks and class projects	4,14
Socratic dialogue	4,12
Guest lectures	3,9
Company report studies	3,71
Ethics professors' lectures	3,62

Notably, the highest values were assigned no to the traditional teaching methods, such as lectures, but to the interactive ones, like discussions, dialogs, case studies. This is exactly, what would be appropriate for the insert modules, because of the limited number of (6-8) contact hours, so the course should be based on the material students have covered beforehand in the respective course. For example, if the course title is Human Resource Management, the insert module would offer case studies and discussions in the field (such themes as corruption, discrimination, harassment, bossing, etc.); in addition, there could be independent research projects with subsequent presentations. Thus, the result (the mark) of the module would be included in the overall course evaluation.

Yet another field of the current inquiry was related to the sources to be used in the learning process. The answers are not depicted in the table here, but, in short, among the most valued sources for ethics learning the business school professors mention video materials - cases studies, analyses, short presentations by business guru, etc. (mean 3,79) and company reports (mean – 3,44), whereas the last place is assigned to the traditional textbooks (mean - 3,09). Does mean that the textbooks should be abandoned for good? Maybe in the classical chapter structure format yes, but, at the same time, we believe that they can be substituted by the interactive e-materials with hyperlinks, possibilities to create personal stories and case studies, mind maps, etc.

As to evaluation forms, all the answers follow the same pattern (see Table 4) – the traditional approach that exhibits some kind of passivity (research papers and written exams) are believed not to be the most effective, while the priority is given to smaller-scale projects and presentations close linked to the basic subject. Again we would like to stress the role of coordination of Without any doubt, this should be taken into account when planning an insert module.

Table 4. Knowledge evaluation forms

Item	Arithmetic mean
Individual projects	4,16
Individual/group presentations	3,88
Group projects	3,76
Case studies	3,64
Research paper	3,55
Written exams	3,05

The final set of items of the survey was devoted to the value of the ethics education for students' professional and career advancement and personality development (see Table 5).

Table 5. Significance of Ethics education for students

Item	Arithmetic mean
Ethics education helps student to evaluate situation from the ethical standpoint	4,02
Ethics education helps students become aware of ethical issues in business	4,0
Ethics education helps students to become aware of their personal values	4,0
Ethics education has a positive impact on students value system formation	3,91
Ethics education helps students in solving ethical dilemmas	3,79
Ethics education helps students to formulate an argument in business negotiation process	3,79
Ethics education helps students to understand that good ethics means successful business	3,79
Ethics education helps students to solve conflicts	3,69
Ethics education develops students' sense of moral responsibility	3,59
Ethics education develops students' analytical thinking skills	3,59
Ethics education develops students' strategical thinking	3,41

As we can see – all responses are positive – the arithmetic mean fits in-between points 3,41 and 4,02. This means that the business school teaching staff holds quite high regard for the role ethics education in the contemporary business environment. Despite the very slight discrimination among results, we can point out at least one tendency – ethics instruction is viewed by the professors largely through the lens of the traditional normative and deontological approaches stemming from Aristotle and Kant. In other words, the worthiness of the ethics education in business schools is situated in the areas of the personality development (it is very important, of course), but the lower values were gained to the ethics place in the strategic management issues that, in turn, are the crucial points in the case of the insert module teaching mode. This again emphasizes necessity of some kind of business education for the ethics instructors (seminars, workshops, round table discussions, business visits, etc.) and the ethics education for the special subject instructors in the business schools applying various interactive and novel (off-line and on-line) methodologies.

Conclusions and Recommendations

1. The purpose of the current research amounted to the investigation of the Latvian business school professors' attitude to teaching forms and methods of business ethics and working out the proposals for the Business Ethics insert module development. To attain this purpose, first, the literature review on the current trends in the ethics instruction in business schools was carried out, including also the previous research in the field (done also by the authors of this investigation). Second, the survey of the business schools professors (n=174) applying 5-point Likert scale was performed (40 items altogether).
2. Two research questions were put forward: Q1: Do lecturers see that knowledge of ethics can foster their students prospective careers? Q2: Should Ethics be taught as an independent course or as an insert module? As to the answer to the first question we can conclude that although there was not a great variation in valuation (all answers were higher that 3 points), the career advancement aspect earned the lowest position. The same goes for the low placement of the strategical management aspects when asking about the significance of the ethics education for students (in professors' view). This can be explained by the fact that the professors themselves have received the traditional ethics training (rather theoretical perhaps) in their time and they are not familiar with the latest trends and developments in the field. This calls for the professors' ethical training. The answer to the second research question is the following: there is no univocal agreement upon the ethic teaching mode (almost even split between the integrated model, the stand-alone course, and the insert module). Therefore, we can think about three prospective future scenarios, each of which requires a different course planning and execution, depending on the business school (university) strategy. In our opinion, positive attitude towards the insert model opens up a possibility to carry out the ethics education also in the situations where there is no a room for the ethics, the corporate social responsibility or the sustainability course with good results.
3. In our opinion, the procedure of working out and implementing the insert module mode of the ethics instruction should follow these subsequent steps:
   (1) Formation of the initiative group consisting of business ethics teachers, business subject instructors, practitioners in order to work out the working proposal (the optimal number of participants 10-12);
   (2) Offering the proposal to business school and faculty administration, working out all the details and gaining their approval if any;
   (3) In case of their agreement, organizing seminars, workshops, discussions for the respective schools professors (those who might be involved in the teaching later on), the result would be the module that can be inserted in different courses;
   (4) Model testing in some of the business schools or university business programs;
   (5) Surveying the test participants (both professors and students) by the means of in-depth and semi-structured interviews;
   (6) Model improvement and offering it as a part of business school curriculum.

Plagiarism Rate = 9%

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Corruption in Business Interactions in Retail Enterprises in Latvia and Sustainability Education

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Abstract
Private consumption is a cornerstone of the growth of any country economics. Since a retailer is an intermediary in a distribution channel that purchases goods from both manufacturers and wholesalers, it provides a large number of transactions with suppliers. It is precisely the size of retail businesses that creates a possibility of corruption in these business relations, which reduces the fair competition. In order to identify the factors of corruption in retail transactions with suppliers, the authors of the study have set out to investigate the factors that characterize and influence the relationship between suppliers and retailers. To reach this goal the authors of the current report will apply the monographic method to analyse the theoretical background of the corruption risks in business transactions, and the tendencies of the retail sector development in Latvia. This study will provide companies with an understanding of the business relationship between suppliers and retailers. As a result of the research, the authors conclude that companies can find solutions to mitigate and prevent the main factors of corruption risk formation. The results obtained could be used in the process of sustainability education.
Keywords: Sustainability education, retail trade, corruption, business transactions

Introduction

Private consumption is one of the cornerstones of economic growth and therefore retail can be considered as an indicator of national economic growth. After the restoration of independence, retail trade in Latvia and throughout the Baltic States has developed with changing consequences. For several years it was one of the largest producers of gross domestic product. Retail is the intermediary between producers and consumers in the distribution channel for products. I. Linina defines retail trade as a sector that sells goods and services to individual consumers, both in-store and out-of-store (online, direct marketing, etc.), to meet his personal, household needs. (Linina, 2017)

As a member of a distribution channel, retailing performs the following functions:

- eliminates the disharmony between supply and demand;
- manages stock of goods;
- promotes product transportation efficiency;
- develops an assortment of goods according to consumer needs, including:
- establishes contacts and negotiate with product suppliers;
- serves consumers, sells goods and services to them;
- carries out marketing activities (research, communication, etc.);
- takes upon risks to ensure the smooth operation. (Praude, 2011; Kotler & Keller, 2006; Best, 2005; Krūmiņa, 2007)

In this process, there is cooperation between manufacturers or wholesalers and retailers, and both parties have a specific purpose. The manufacturers and wholesalers are the ones who are dissatisfied with the benefits and losses of this collaboration. Consequently, it is important to identify the main causes of dissatisfaction, because if one side gains this cooperation and the other loses it, it cannot be considered as promoting business. It should also be borne in mind that the problems inherent in the current situation may only increase in the future, so it is important to identify them and to try to prevent or solve them.

But is equally important to educate future business practitioners (i.e. students) regarding the subject of corruption and its economic and social consequences. (Hoinaru et al., 2020) This can be done within the courses on sustainability, corporate social responsibility, business ethics and others. There has been a massive research in the topic of ethics education (as well as CSR and sustainability education) within the last two decades that demonstrates, first, the urgency of the problem within the fast changing economic, social and cultural environment, second, the generational changes (generation Y – the millennials with their unique set of mind), and, third, technology advancements (digital tools, online courses, etc., that require the whole new teaching skills from university and business school professors). (Rasche et al., 2013; Acevedo, 2013; Tello et al., 2013; Cornelius et al., 2007) Still, in order to develop the educational and practical training material, it is necessary to research the current situation. The importance of knowledge on corruption risks and different manifestations is of the vital importance for future businessmen training. The particular form of instruction (the insert module) has been proposed by Daudisa and Vevere. (2020).

Thus, the goal of this study is to investigate the corrupt nature in collaboration between manufacturers or wholesalers and retailers.

In order to reach this goal, the following tasks were set:

1. To analyse theoretical aspects of corruption process.
2. To characterize retailing sector in Latvia and its development tendencies.
3. To identify the factors that negatively affect the cooperation of manufacturing or wholesale companies with retail companies

Twelve experts were interviewed to determine the negative characteristics of the cooperation between the manufacturing or wholesale company and the retail trade. Research period: January 1, 2020 to March 1, 2020. The following research methods have been used: the logical-constructive method - to compare theoretical material with empirical results; the graphical method - for visualization and analysis of information; the expert interviews. The methodological basis of the research consists of the works and publications of researchers who provide insight into the latest information on corruption in the business environment.

Results and discussion

The object of the current research is the retail sector. Retail is an intermediary in the distribution channel for products. A product distribution channel is a set of related companies that participate and perform all functions in the process of transferring, distributing, promoting and selling products and related values from the producer to the consumer. (Kotler et al., 2011) The development of retail companies in recent years shows that retail trade as a whole is a profitable business in Latvia, which is also evidenced by the dynamic growth of turnover every year since the end of the global economic crisis (see Figure 1).

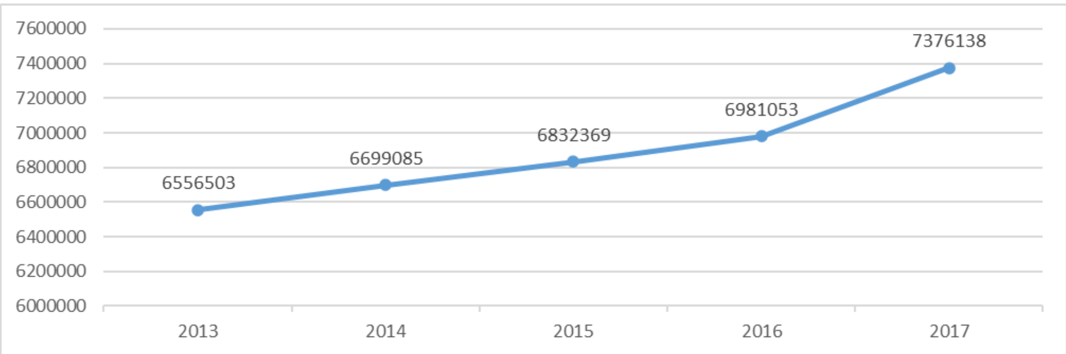

Figure 1. Retail trade turnover in Latvia, thousands euro (Source: CSB, 2019)

The issue of unfair commercial practices in business-to-business relationships has become increasingly topical in recent years and, although it is not easy to fully appreciate the phenomenon, a number of statistics and market analysis show that these practices are quite common and particularly prevalent. In a survey conducted in March of 2016 (European Parliament, 2016), surveyed in the food supply chain, 96% of respondents said they had already been exposed to at least one type of unfair trading practice. Other sectors are also researching on this issue. For example, researchers Caripis L., Shaw A. and Skok A. (2019) studied the risks of corruption in the mining industry. Their recommendation in this regard is to identify and manage all corruption risks by developing an anti-corruption strategy.

Swedbank Business Center in cooperation with GfK CR Baltic conducted a survey in January-February 2011 by interviewing senior executives of 200 Latvian exporting companies on the factors that promote and hinder the competitiveness of Latvian export companies. (Delna, 2012)

Top 5 factors affecting competitiveness in Latvia from the point of view of entrepreneurs are:

1. Taxes applicable to employees and companies;
2. Latvian road quality. The burden of bureaucracy and the speed with which decisions are taken by public authorities;
3. Level of corruption in state and municipal institutions;
4. Purchasing power of Latvian consumers;
5. Level of corruption in business. Availability of necessary staff.

As can be seen in the survey, in the 5th place the managers of enterprises have assigned to the level of corruption in entrepreneurship. So it is a factor that also affects the business relationship of a retail company.

Corruption is the abuse of the power entrusted by the public, whether personal or close for the benefit of the people. Corruption endangers the economic, social and legal development of the country and the exercise of the rights and freedoms of every citizen, thereby undermining public loyalty to the state and affecting the political stability of the country. Corruption affects public administration, weakening its capacity to serve society. It hampers decision-making and choice, because corrupt officials, politicians, contract with those who offer illicit profits rather than the best products and services. Corruption most often occurs where the public and private sectors collide. Especially where public officials are directly responsible for serving the public or issuing specific regulations. (Delna, 2012) But by taking a look at the study by Swedbank, one can see that corruption has also spread to the business environment.

This question can be discussed also from the viewpoint of the Corruption Perception Index. (Transparency International, 2019) Since its inception in 1995, the Corruption Perception Index, the Transparency International's flagship research product, has become the leading global indicator of public sector corruption (see Table 1).

Table 1. Corruption perception index (atsauci uz)

Nr.	Country	2015	2016	2017	2018
1	Denmark	91	90	88	88
…					
18	Estonia	75	73	74	73
…					
38	Lithuania	59	59	59	59
…					
41	Latvia	56	57	58	58
…					
180	Somalia	9	10	9	10

Bussmann and Niemeczek (2019) researched 15 German companies and interviewed 2,000 managers in German parent companies and 600 managers in Central and Northern European branches found that corruption is directly linked to company culture and ethics. The senior management of companies, who are responsible for developing the company's culture and ethics, determine the existence or absence of corruption in the company. The study also found that, while regional differences exist, high ethical and cultural companies are able to operate without corruption.

It is very important to understand whether this factor is attributable to the retail sector. Expert methods are increasingly used in the evaluation and forecasting of socio-economic processes. Expert survey is mainly used for diagnosing and forecasting industry problems and analyzing and solving research problems. (Kristapsone et al., 2011) An expert is a qualified specialist in the field who expresses his or her opinion, for example, in the evaluation of a particular activity. In addition, the expert can evaluate various (significant and insignificant) factors, goals, better ways of achieving them, performance, etc. Therefore, the authors of the thesis chose the survey method of experts, which is considered as one of the most suitable methods for evaluation of cooperation with retail companies. Unlike statistical methods, experts, due to their experience and knowledge of the situation, take into account several factors that cannot be analyzed.

The authors followed four steps in the implementation of the expert survey method:

Preparation of expert survey. During this phase the following tasks were solved:

• the problem to be investigated was formulated and the purpose of expertise was specified - to evaluate the cooperation of enterprises with retail enterprises in Latvia;

• Based on the purpose of the expertise as well as the specificity of its object, a specific expert method was selected - a survey with structured questions;

• a questionnaire was developed.

Choice of experts and composition of the expert group. At this stage, the numerical composition of the expert group was determined, the competence of the expert group was analyzed and the necessary information was provided to the experts. Too many experts often reduce the overall expertise of the expert group, but in small groups of individuals, the results can be significantly influenced by individuals. The solution is a compromise variant. After consultation with a number of experts and given the knowledge of the experts in the field, the authors identified a group of twelve specialists. In selecting the experts, the authors of the paper were guided by the experience and knowledge of the specialists and their ability to understand the process as a whole. Potential experts responded to questions about the peculiarities of business partnerships with retail businesses and rated their level of expertise on each of these issues, with a maximum score of the area where the specialist is most focused. The authors then compared the individual assessments of each specialist to the average self-assessment of potential experts on all questions. Numerically, the level of competence of a potential expert was assessed by the formula. As the result, the group of experts was created. (Vasermanis et al., 2002)

Characteristics of the expert survey. The expert survey was conducted between January and February 2019. Based on the objectives of the expertise and taking into account the peculiarities of the expert group, the authors selected the following characteristics of the expert survey:

• An individual survey, in which experts participate independently;

• Off-site survey where experts provide answers individually, without the direct assistance of expert organizers;;

• Closed-ended questionnaire, where each expert is not informed of the answers of the other experts;

• Closed-ended questions where each evaluation question is preceded by a specific scale and the expert only needs to select one of the quantitative assessments;

• Open-ended questions where the expert can express his or her opinion on the issue under consideration.

Next, the authors of the current research carry out processing and analysis of expert interviews (see Table 2).

Table 2. Summary of expert opinion

Nr.	Question	Summary of answers	Conclusions
1	Do store employees benefit materially from suppliers?	Expert opinion was divided, with several saying no but some also affirming	A positive answer from some experts to this question also points to the risk of corruption
2	Does the retailer's administration benefit from suppliers?	Expert opinion was divided, with several saying no but some also affirming	A positive answer from some experts to this question also points to the risk of corruption
3	Are non-returnable samples of goods required?	All the experts answered affirmatively	Samples are an integral part of product promotion, but samples can have different values and can cause loss to the company
4	Have material support been required for retailer marketing activities?	All the experts answered affirmatively	Marketing support to an intermediary is essential for the promotion of a product but must be proportionate to the supplier's capabilities
5	Does the reward for retailer's activities affect collaboration?	All the experts answered affirmatively	The affirmative answers to this question indicate a very high risk of corruption
6	What is the average loss for businesses to partner with retailers?	Here the answer varied widely, ranging from 10,000 euros to 1% of turnover	The affirmative answers to this question indicate a very high risk of corruption and affect the development opportunities of the supplier company
7	Did the entry into force of the *Unfair Retail Trade Practices Prohibition Law* affect the cooperation between retailers and suppliers?	The majority of experts acknowledged that the relationship between retailers and suppliers was not affected by the entry into force of the law, but some felt that the effect was more negative	Expert responses indicate that the law has not achieved its purpose
8	How will the relationship between retailers and suppliers change in the near future?	The majority of experts believe that the relationship between retailers and suppliers will remain unchanged in the next 5 years, but some believe it will improve	Expert opinions point to the possibility of resolving any problems that may arise between retailers and suppliers

Experts were given the opportunity to rate retailers' cooperation with suppliers on a 5-point Likert scale, where 1 is very low and 5 is high. Summing up the expert judgment and calculating the arithmetic mean, it is 2.1, which is rated as very low. This indicator points out the problem and the need to find a solution to it.

In the open question on recommendations for improving cooperation between retailers and suppliers, experts have pointed to opaque decision-making by retailers and inadequate monitoring of compliance with the Law on the Prohibition of Unfair Retail Practices. (Legal Acts of the Republic of Latvia, 2015)

Conclusions and recommendations

1. The Law on the Corruption Prevention and Combating Bureau of the Republic of Latvia defines corruption as "bribery or any other act of a public official aimed at gaining, for the benefit of himself or others, the exercise of official authority, authority over or in excess of that authority". There are several forms of corruption, such as administrative corruption, political corruption.

2. Corruption is widening the "shadow economy", increasing social inequalities and slowing down the development of democracy. In Latvia, all law enforcement agencies, including the Corruption Prevention and Combating Bureau, fight corruption.
3. On 1 January 2016, the Law on Prohibition of Unfair Retail Practices and the related amendments to the Competition Law came into force. The purpose of the Unfair Retail Practices Prohibition Law is to balance the interests of suppliers and retailers by limiting the use of retailers' purchasing power against suppliers.
4. Summarizing the results of the expert survey, it can be concluded that the experts have evaluated the cooperation of retail companies with suppliers to 2.1 points in a 5-point system, which is rated as very low and indicates problems in this area and urgent solution thereof.
5. Analyzing the expert's replies further shows that suppliers, that is to say manufacturers and wholesalers, are forced to provide free samples to retailers without taking into account their costs, which can cause significant losses for them.
6. Experts have also pointed out that retailers require material benefits to ensure successful collaboration, and refusing to cover marketing activities may adversely affect future collaboration.
7. Experts agree that co-operation with retailers is difficult and costly for manufacturing and wholesale companies and that this issue should be addressed at national level.
8. Further research and solutions are needed to further understand the issue that illuminates retail companies' unfair treatment of manufacturing to wholesale companies. It would be crucial to identify all risks of corruption in the retail industry and to develop a strategy to reduce or eliminate them.
9. The results of the current research can be used for developing materials, case studies and exercises to be applied in developing insert module of corporate social responsibility and sustainability for business students.

Plagiarism Rate = 8%

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Problems by Level of Difficulty in Testing Pupils in Mathematics

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Abstract
In this article we will deal with the possibility of using problems by level of difficulty in testing pupils in mathematics. We created a non-standardized test of problems by difficulty level, which we assigned to pupils of the ninth grade of an elementary school (pupils at the age of about 15 years). We wanted to find out whether such tests are suitable for verifying knowledge and skills to solve mathematical tasks, how pupils work with a set of difficulty level problems, which levels of difficulty they will choose and also how they mastered the mathematics curriculum of elementary schools at the end of their elementary school attendance.

Keywords: Problems by level of difficulty, School mathematics, Individual approach, Testing

Introduction
Pupils gain knowledge and skills in mathematics mainly by solving suitably selected tasks. Their implementation into mathematical education forms the basis of effective mathematics education. Today's education puts increasing emphasis on an individual approach to pupils. When teachers assign tasks to pupils, they must take into account the individual abilities of all pupils in the classroom. There can be up to thirty pupils per teacher in the classroom, there may be considerable differences among students in their knowledge of mathematics and the ability to use it for solving tasks, especially verbal problems. Therefore, it is difficult for teachers to achieve an individual approach to each pupil.
One of the suitable means of individual approach are problems by level of difficulty that ensure differentiation of teaching. Pupils choose one of the levels of difficulty offered to match their abilities and thus have the opportunity to succeed, which increases their self-confidence and motivates them to study mathematics.
Problems by level of difficulty, also called graded problems, may be one of the tools of differentiated teaching (Brincková, 2006; Švrček, 2014). Problems by level of difficulty in mathematics are series of problems that practice one area of the mathematics curriculum with graded difficulty of problems, where each series usually contains three differently demanding variants of the problem. Problems by the level of difficulty are often visualized on a ladder, where the main task appears on the middle rung, the advanced difficulty rises on the top rung, and below is a modified task for those who need additional support or guidance to deal with the activity. (Tomlinson, 1999).
We used a non-standardized test of problems by difficulty level. The term didactic test can be defined as "a tool for systematic determination (measurement) of teaching results" (Byčkovský, 1982). A well-prepared didactic test is one of the ways in which a teacher can obtain information about teaching and what results students achieve. (Průcha, 2009) The basic features of the didactic test are validity, reliability, practicality, difficulty, sensitivity. (Průcha, Walterová, Mareš, 2003)

The main goal of the research survey was to find out how students work with the test composed of tasks by level of difficulty.
We were also dealing with the following sub-problems

- to find out how students master the curriculum they should already know.
- to find out what mistakes students make in their calculations.
- to compare the success of the solution according to gender, according to the grades from mathematics on the last report card and according to the type of school, which students start after completing basic education.

Method

We created a non-standardized **test** of problems by difficulty level, which we assigned to pupils of the ninth grade of an elementary school (pupils at the age of about 14 to 15 years). During the test, **observation** was used as another method of data collection. The observations were participatory, direct and unstructured. Observation showed that most of the students concentrated and tried to solve the problems, but there were also students who did not care about the testing. Testing of pupils was supplemented by a questionnaire for pupils to determine their relationship to mathematics and the opinion on the test.

The test contains word problems. In order to solve word problems correctly, students must practice solving them, which they can do also by creating the word tasks themselves. They proceed as authors of word problems vice versa - for a numerical task they create a verbal assignment of the given task. (Blažková, Matoušková, Vaňurová, 2007)

The created non-standardized test contains word problems, for the solution of which the student needs to know the subject of mathematics taught at lower secondary schools (Křížová, 2019). The test contains 33 graded word tasks, which were divided into three levels of difficulty. Each level contains 11 tasks. Easy tasks are rated 3 points, common tasks are rated 4 points and difficult tasks 5 points. The test serves as an indicator of monitored parameters in the way of choosing problems to solve and the degree of bias in the given problems.

The principle of the test was inspired by the Mathematical Kangaroo competition, where the tasks are divided into three categories of difficulty and the individual difficulties are rated 3, 4 or 5 points. Scoring was retained, but assignments were open and points for incorrect answers were not deducted.

The mathematical test included the following topics: Unit conversion, least common multiple, greatest common divisor, area and perimeter of planar shapes, ratio, percentage, Pythagorean theorem, expressions, linear equations, systems of equations and surface and volume of bodies.

The test was given to all 52 students in two classes of the last year of their study at an elementary school in the city of Opava in the year 2019. Testing of students took place at the end of the school year 2018/2019 just after the entrance exams for secondary schools. Students were informed about the test in advance, they had repeated the material of the last 4 years, so that they could prepare for the entrance exams. They were not particularly prepared for our testing. Before starting the testing, students were informed about how to work with the test. The choice of difficulty is up to students according to their needs and abilities, it is possible to count examples in any order, there is a time limit for completing the test, to successfully solve the test it is necessary to obtain at least 44 points from possible 132 points.

Students were explained in advance that the test is designed so that they do not have time to calculate all the examples within a given time limit, so they must choose the examples themselves to meet the required number of points if possible. Students were allowed to use calculators during testing. Testing in both classes took place on the same day.

The test was supplemented by a short **questionnaire** for students. Students were asked the following questions:

- Do you enjoy mathematics?
- How did you work with the test?
- Did you find the test difficult?
- Have you ever come across the concept of a problems/tasks by level of difficulty?
- Does the teacher use problems/tasks by level of difficulty in mathematics lessons?

Findings

In this article, we will mention only selected partial results, but we will try to make general conclusions and recommendations on this issue.

As an example of test tasks, let's mention tasks for the topic of unit conversion. Similar problems can be find in (Eisler, 1999) or (Dytrich, Livňanská, Dobiasová, 2001).

3-point task: Convert 0,2 m^3 into liters. [Result: 200 l].

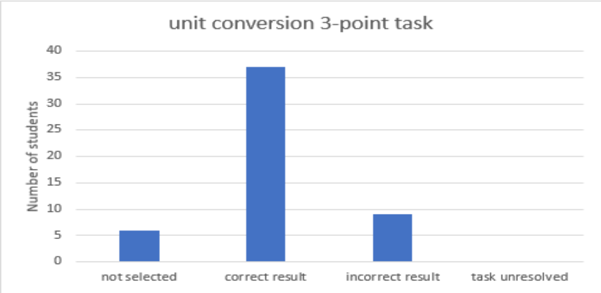

Figure 1. Results for a 3-point task

4-point task: The rectangular plot is 3200 cm wide and 0.085 km long. How many CZK will we pay for covering the land with a lawn at the price of CZK 3500 / ha? [Result: We will pay CZK 952 to cover the land with a lawn.]

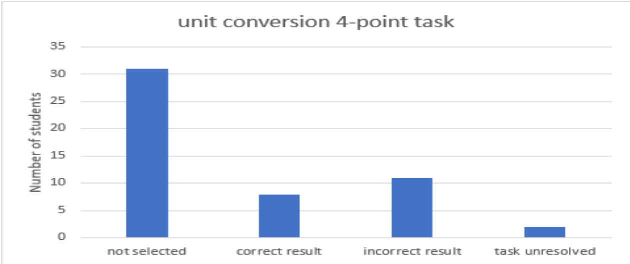

Figure 2. Results for a 4-point task

5-point task: The tank is 35 dm wide, 480 cm long and 6 m deep. The pump delivers 300 l of water per minute. What time will the tank be exactly to the brim if the tank starts to fill at 8:00 in the morning? [Result: The tank will be full at 13:36.]

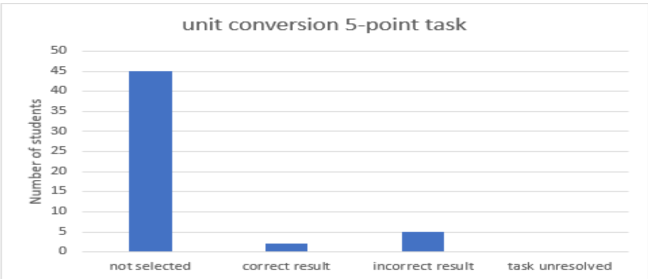

Figure 3. Results for a 5-point task

Let us list now the most interesting results of the whole test, not the individual examples.

Girls received an average of 26 points, boys 31 points. But the most successful solver was a girl who scored 95 points, the maximum number of points scored by a boy was 83 points. Only 21.15% of students passed the test. The average number of points that students achieved in the test was 28.8 points.

An important result is finding out what level of tasks students choose to solve. Most choose simple examples, only some chose difficult tasks, see Figure 4.

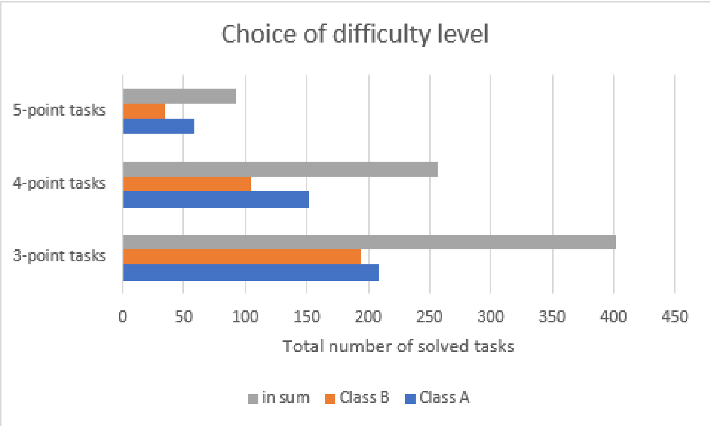

Figure 4. Choice of difficulty level

Further investigation did not come as a surprise. Students completed the test in accordance with the evaluation of their teachers on the school report card. The best students applied to grammar schools, the others to secondary vocational schools.

Let us list the answers of students in the questionnaire survey that followed after writing the test.

- To the question "Do you enjoy math?" only 15.4 % of students answered "yes", 55.8 % of students answered "no" and 28.9 % of students answered "sometimes".
- The question "How did you work with the test?" was opened. 46 % replied that well, 17 % poorly, and from other answers let's choose the following: "weird", "normal", "not much", "cool", "it was nicely done, but if I got it before the high school entrance exams, I would do it" , "little time, I should have repeated something before," "the test was clear, but I can't solve word problems."
- To the question "Was the test difficult for you?" we got these answers: Challenging 44 % of students, not challenging 17 %, a little challenging 8 % and some parts of the test were challenging for 31 % students.
- Have you come across the concept of problems/tasks by level of difficulty? 27% of respondents knew the concept. Some other students knew the principle of problems/tasks by level of difficulty, but encountered the term for the first time.
- Does your teacher use problems/tasks by level of difficulty in teaching mathematics? (Here the term was explained, so they could answer the question.) The teacher in class B does not use the tasks, in class A yes, but irregularly. Students in class A achieved slightly better results in the test.

The following graph shows how the respondents to the questionnaire like mathematics depending on their math grading at school.

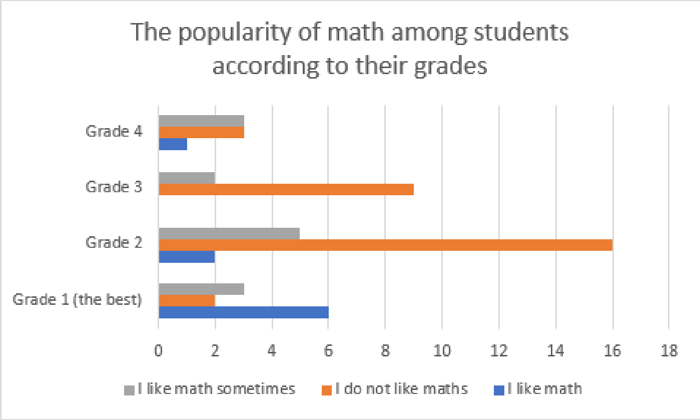

Figure 5. Popularity of mathematics among students depending on the grades from mathematics at school.

Results, Conclusions and Recommendations

Problems by level of difficulty are very suitable for practicing the subject of mathematics and it is good to use them in every lesson. However, they are also suitable for other subjects, such as physics or languages.

Of course, tests using problems according to the level of difficulty have their advantages and disadvantages. The main advantage is that they can bring success to any student, regardless of his abilities. Good students do not get bored in class when counting difficult tasks and at the same time excel. Average students can choose according to their current mood, current readiness, and weaker students can successfully solve these examples with the right choice of examples at a lower level, and thus experience success that can boost their self-confidence and therefore find a positive relationship to the subject. If a student experiences success, it is a great motivation for further study. The disadvantage is that students have to be prepared to work with graded tasks and it is not an easy task for teachers. They need a large supply of examples and must have them broken down into appropriate levels. It is necessary to work with students in this way continuously, preferably throughout the school year. Students must be gradually prepared for tests using graded assignments in class. Otherwise, for them, selecting a problem of a certain level of difficulty can be a distraction, it can slow them down. Tests using problems by level of difficulty should not be the only form of tests and the source of assessment for students in mathematics teaching. The teacher should use different options for grading and evaluating students.

Together with the conclusions of the study (Laitochová, Uhlířová, Pastor, 2020), we state that some teachers in practice are quite well acquainted with the issue of differentiated teaching and problems by level of difficulty, there are still some reserves. It is necessary to be aware of the advantages and disadvantages of such tests. This is a task for teacher training faculties, to deal with the issue of differentiated teaching, which offers to experience success for all students and thus motivate everyone to further interest in mathematics (and other subjects) and its understanding.

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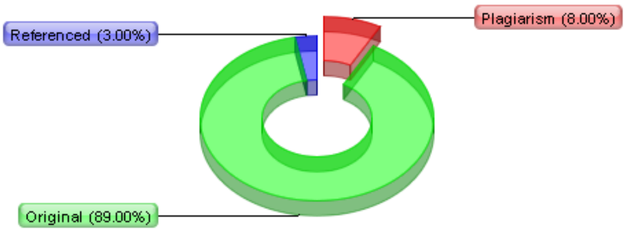

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Exploration of Language Skills of Monolingual and Bilingual Pre-school Children

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Abstract. Provision of a high-achievement oriented language acquisition for both monolingual and bilingual children is always a challenge for the public education system. Currently, the Latvian education system is undergoing significant changes, part of which affects the acquisition of national language, strengthening the place and the role of Latvian as the state language in the learning process. This publication describes a study, which involves children who attend monolingual and bilingual pre-school education programmes. The research objective framework includes analysis of regulatory requirements of children's language skills and their mutual correlations. For this research the observation method is employed, which allows assessing the children in the fields of expressive speech and literacy. For statistical analysis of the research data the method of descriptive statistics was used.
The research results generally confirm a relatively balanced development of native language skills for potential graduates of the monolingual pre-school education programme. While in the group of bilingually educated children, a general lack of using Latvian vocabulary and spoken language is detected. The study results identify relatively limed reading skills in both groups of children involved in the study.
Keywords: Language skills, pre-school education, monolingualism, bilingualism.

Introduction

Language skills, their development and application is a constant area of research. The topicality of the research interest is based on the belief that success in modern industrialized society depends on having good verbal skills (Hoff, 2001). Therefore, also on the political level language skills are linked to the people's need for a personal fulfilment and development through the promotion of employment, social inclusion and active citizenship (EK, 2018a).

The analysis of scientific research studies confirms the differences in the definition of language skills. In linguistics, for example, this term refers to language competence in the specific language domains (Bachman, 1990; Butler & Stevens, 2001; Reichert-Garschhammer & Kieferle, 2011). In turn, B. Dahlhaus describes language skills as the result of complex interactions between linguistic, nonverbal and extra-linguistic elements (Dahlhaus, 1994). Depending on language acquisition and use, the skills are differentiated into two specific groups: (1) Receptive or passive skills, which are manifested through the comprehension of the speech and text; (2) Productive or expressive skills, meaning speaking and writing (Faistauer, 2001; Field 2004; McLaughlin 2006).

The general characterization of language skills described above applies to both monolingual and bilingual individuals. As it is known, "bilingualism is the ability to speak two languages fluently" (McLaughlin, 2006, p. 403). The research studies show that bilingual people have two language competence systems, so called the first and the second language, with different characteristics in particular areas. In contrast, the set of the second language skills can be differentiated in specialized subsystems, such as oral dialect and written language (Garschhammer & Kieferle, 2011; Hoff, 2001; Nodari, 2002).

Provision of a high-achievement oriented language acquisition for both monolingual and bilingual children is always a challenge for the public education system. In relation to bilingual education, an approach that is being implemented in Latvia starting from pre-school education, is defined by A. Sirbu as “official bilingualism”, which is expressed in the official use of the languages of minorities and the state language in the educational process (Sirbu, 2015). Here it should be added that currently the education system of Latvia is undergoing significant changes, some of them also concern bilingual education, reinforcing the place and the role of Latvian language as the state language in the study process (MK noteikumi, 2018).

Based on research data, the objective of this study is to determine the correlation between the regulatory framework requirements of the education system and the actual achievements of bilingual education. This study involves children with Latvian as their mother tongue and children with Russian as their mother tongue at the final pre-school education phase. The focus of the study of children's language development is on language production and comprehension skills.

For this study the following research questions have been put forward: (1) Which components represent the language skills of children educated in monolingual and bilingual manner at the final stage of pre-school education and (2) What is the compliance of the language skills of children educated in monolingual and bilingual manner with the formal requirements for starting primary education.

This study is conducted within the framework of the State research programme project "Latvian Language" (Nr. VPP-IZM-2018/2-0002)

Language development of monolingual and bilingual children in pre-school age

As it is known, in the process of using the language and learning the language, the components of content, form, and application come together in understanding and expressing the message (Bloom, Lahey, 1978; Greory, 2002). The way how children develop their language skills is focussed on the quest for development and broadening of their skills already from an early stage. First, children learn to understand and use different sounds, then words, and finally sentences and the whole texts. In this way, various interactions with the social environment occur through the use of the language tools that stimulate the child's personal development and social experience.

The research studies related to the development of monolingual children confirm that there are three phenomena that characterize the lexical development in the pre-school period: (1) Expanding of vocabulary; (2) Growth in knowledge of word formation processes and (3) Increasing ability and importance of being able to learn new words from the context (Hoff, 2001). In addition, the vocabulary of 5-6 year-old children covers 2100 to 2200 words (Owen, 2005). Although the rates will vary, it has been estimated that during the pre-school years the children add new words to their expressive vocabulary at rates of two to five words per day. It has also been estimated that pre-schoolers will learn nine new words per day, accumulating receptive vocabulary to as many as 14,000 words by the age of 6 (Garschhammer & Kieferle, 2011; McLaughlin, 2006).

In addition, it is important to underline the well-established relation between the vocabulary and literacy. On the one hand, the richer the child's vocabulary is, the higher is the level of comprehension of the written texts. On the other hand, vocabulary development is stimulated by a productive reading of written texts (Hoff, 2001; Groeben & Hurrelmann, 2002).

In relation to the grammatical skills, S. McLaughlin, referring to research analysis, indicates that children learn up to 90% of the grammar together with a large vocabulary and its phonemic structure up to the age of 5 (McLaughlin, 2006). These skills are manifested through the use of morphology and syntax elements, and they sum up in forming meaningful and formally correct sentences.

Research studies show that the pre-schoolers are able to exhibit a range of communication modes – they may talk to themselves when they play on their own or even when alongside other children, or talk interactively with everyone in their presence. At the same time, they continue to refine their conversational skills through more appropriate management of topics, turns, and background information. Children are increasingly capable of telling stories that go beyond merely relating numerous isolated details to conveying themes and attitudes about events, and they earn words in a way that reflect their rapidly expanding experiences and their understanding of those experiences. During the pre-school period, children's expressions increasingly include complete semantic elements – for example, the agent, action, and object complements the sentence (Kauschke, 2000; McLaughlin, 2006; Weisseborn, 1999).

As mentioned above, a bilingual speaker can be broadly defined as an individual who can speak and understand two languages. The research analysis confirms that bilingual children are exposed to a more diverse set of linguistic structures than monolingual children. Despite the reduced exposure to each language, many bilingual children meet this challenge and develop linguistic systems that are comparable to monolingual peers at least in one language or in both (Fabiano-Smith & Goldstein, 2010; MacLeod et al., 2011).

Depending on the language learning conditions, two types of bilingualism are distinguished. When children acquire two languages at the same time from birth till the age of 3, their bilingualism is referred to as simultaneous bilingualism. When children acquire a second language after the development of the first language is underway, their bilingualism is referred to as sequential or successive bilingualism (Bhatia & Ritchie, 1999; Hoff, 2001; McLaughlin, 2006).

In line with the research objective, the publication focuses on the educational design in the pre-school stage in relation to teaching first and second languages to those who want or need to learn them. Thus, the sequencing type of bilingualism is emphasized in the design of this study. In these cases, children often go through four stages of language development: (1) Home language use; (2) Observational and listening period; (3) Telegraphic and formulaic speech and (4) Fluid language use (Hoff, 2001; McLaughlin, 2006).

The research analysis confirms that language interference and code switching are relatively common features of this type of bilingualism. Based on research studies, E. Reichert-Garschhammer, Ch. Kieferle and E. Peristeri describe language interference as the transfer of elements from one language to another at different linguistic levels. In this case the characteristic feature is word borrowings from one language alongside word transformations as to sound more naturally in the other language, or the first language would interfere with the second language in the area of grammar by affecting it, for example, on the level of using pronouns, verb tenses, mood, or word order. This feature of language skills development may be a risk factor for acquisition of literacy (Garschhammer & Kieferle, 2011; Peristeri et al., 2017).

In contrast, the code switching is “the alternation of two languages within a single discourse, sentence or constituent” (Poplack 1980, p. 583), or “the use of two languages within the same conversation” (Gafaranga 2007, p. 279). The alternate use of two languages can be observed in any expressions, in words as well as in morphemes of individual words.

As it is known, in bilingual education the curriculum is provided for children in two languages. For its effective implementation, the diversity of processes and resources related to bilingual learning must be respected. In this context on the political level, according to EC recommendations for EU education system, which includes promoting fairness, equity and reducing the drop-out risks, it should be ensured that all children, regardless their origin and mother tongue, would acquire the state language of instruction on a very high level – if necessary, with the help of a special support measures (EK, 2018b).

As mentioned above, in the bilingual primary education programmes it is planned to increase the use of Latvian as the state language (up to 50%). On the other hand, the minority pre-school education institutions must use bilingual methodology to ensure children's ability to speak also Latvian in everyday conversations. According to the regulatory framework of pre-school education, the basic language skills are divided into two groups: (1) in the language of the instruction a child should be able to: explain why people use the language when communicating, listen to the text and names the persons involved in it, retell events, compose continuation of the text, question the unclear and answer a specific question, talk comprehensively and sequentially about what has been seen, heard, experienced, participate in the conversation without interrupting the speaker, use different speech intonations, distinguish and name sounds, mark a sound with an appropriate letter, read words and understand the text, write letters; (2) In Latvian, a bilingual child should be able to: answer questions about what has been seen and heard, ask for information, express his/her needs, engage in conversation on topics related to everyday life and learning process, learn to pronounce sounds correctly, know printed letters, read short words that are commonly used in daily situations and in the learning process (MK noteikumi, 2018).

The research presented in this publication is devoted to the language development of children involved in monolingual and bilingual pre-school education, observing lexical development, the development of syntax and morphology, and simultaneously also the phonological development.

Method

Population-sampling

The pilot study analyses the speech sample of 5-7 year old children. Depending on the educational environment, the participants of the study are divided in two groups: Group 1: 21 respondents (7 girls, 14 boys) attending a pre-school educational establishment with Latvian language of instruction; Group 2: 15 respondents (8 girls, 7 boys) attending a pre-school educational establishment with Russian language of instruction and learning Latvian as a second language in special classes.

Data collection tools and analysis techniques

For accumulating the children's expressive speech sample, the set of 28 colour images were used, which includes the photographs or graphic images of objects and scenes familiar to the children. Two computer-typed 4-word sentences were used for identification of respondents' reading skills. The research was conducted in the premises of pre-school educational institutions. Audio recordings and transcription of statements are used to register the children's speech sample.

For analysing the data obtained during this study, several basic language skills and their supporting indicators are distinguished: (1) Dialogue – ability to understand instructions, answer questions, formulate questions, initiate conversation, use speech etiquette; (2) Speech flow - ability to speak fluently, paraphrase, logically connect speech, pause; (3) Pronunciation - ability to precisely pronounce sounds, emphasize correctly; (4) Vocabulary - relevant to the theme, diverse use of another language; (5) Grammar – ability to use correct grammatical forms and diverse sentence structure; (6) Reading skill - ability to recognize letters, read syllables, read words, read sentences.

The indicators used to determine the skill acquisition level are the following: insufficient level (0) – does not show or show very minimal knowledge and skills (<5%); low level (1) – shows minimal knowledge and skills (<25%); medium level (2) – shows moderate knowledge and skills (> 50%); high level (3) – shows good knowledge and skills (> 75%).

For statistical analysis of the research data, the SPSS 25.0 program was employed: a method of descriptive statistics, Kendall's tau-b correlation test and Mann-Whitney U test for to determining the differences depending on the group of respondents

Findings

The analysis of the research results reflects the average indicators of acquisition of the language skills in both groups of respondents (see Figure1).

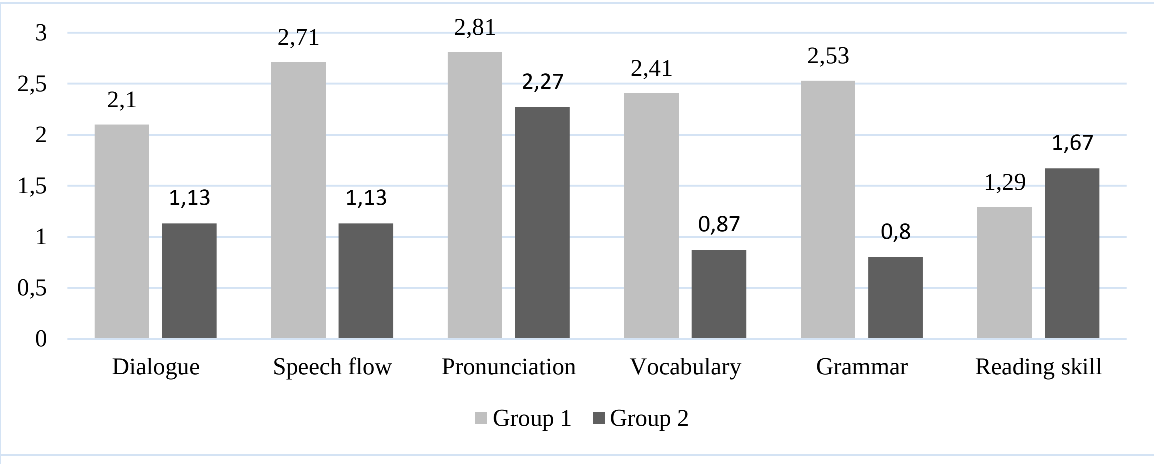

Figure 1. Average indicators of acquisition of the language skills

It shows relatively lower scores in the sections of dialogue and reading skills for the first group of respondents. The data analysis confirms comparatively high results only for pronunciation skills in Latvian for the second group of respondents.

Assessing the results of Mann-Whitney U test, no statistically significant (p> .005) differences were found in the assessment of indicators depending on the group of respondents. In this case the exception is the indicator 'reading skill' (see Table 1).

Table 1. Statistically significant differences in assessment of indicators

Statistic	Dialogue	Speech flow	Pronunciation	Vocabulary	Grammar	Reading skill
p	,000	,000	,009	,000	,000	,072

The results of Kendall's tau-b correlation test show that there are correlations between the indicators (see Table 2).

Table 2. Correlations between the indicators

Indicators	Speech flow	Pronunciation	Vocabulary	Grammar	Reading skill
Dialogue	,691**	,404*	-,055	,616**	-,055
Speech Flow		,442**	-,098	,786**	-,098
Pronunciation			,058	,460**	,058
Vocabulary				-,123	1,000**
Grammar					-,123

** Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed).*

In this case, a close correlation is observed between the indicators ‘Vocabulary’ and ‘Reading Skill’, ‘Speech flow’ and ‘Grammar’, ‘Speech flow’ and ‘Dialogue’.

The results of descriptive statistics tests show the differences in the average value of the indicators in both groups of respondents (see Table 3).

Table 3. Indicator’s value assessment

Indicators	Mean			p
	ALL	Group 1	Group 2	
Dialogue				
SI 1	2.22	2.81	1.40	**.000**
SI 2	2.14	2.71	1.33	**.000**
SI 3	.44	.71	.07	.052
SI 4	.42	.71	.00	**.008**
SI 5	1.44	1.33	1.60	.455
Speech flow				
SI 6	2.14	2.76	1.27	**.000**
SI 7	.58	.81	.27	.541
SI 8	1.81	2.76	.47	**.000**
SI 9	2.25	2.81	1.47	**.000**
Pronunciation				
SI 10	2.14	2.05	1.47	.330
SI 11	2.44	3.00	1.67	**.000**
Vocabulary				
SI 12	2.14	2.67	1.40	**.000**
SI 13	1.81	2.38	1.00	**.000**
SI 14	1.36	2.19	.020	**.000**
Grammar				
SI 15	1.47	2.08	.67	**.000**
SI 16	1.63	2.40	.60	**.000**
Reading skill				
SI 17	2.19	2.71	1.47	**.000**
SI 18	1.00	.81	1.27	.341
SI 19	0.64	.38	1.00	**.042**
SI 20	0.47	.19	.87	**.014**

The data analysis shows that for the indicator 'Dialogue' statistically significant differences are found in relation to the following sub-indicators: 'understand instructions' (SI 1), 'answer questions' (SI 2) and 'start a conversation' (SI 4). But with the regards to the indicator ‘Speech flow’ statistically significant differences are found for sub-indicators ‘speak fluently’ (SI 6), ‘link speech logically’ (SI 8) and ‘pause’ (SI 9). Statistically significant differences have also been identified for the indicator 'Pronunciation', sub-indicator ‘emphasize words correctly’ (SI 11) and for all sub-indicators for 'Vocabulary' and 'Grammar'. Accordingly, statistically significant differences are observed for the following sub-indicators of indicator 'Reading skill': 'know letters' (SI 17), 'read words' (SI 19) and 'read sentences' (SI 20).

Results

As indicated above, for the first group of respondents the research data analysis confirms relatively lower scores in the areas of dialogue and acquisition of reading skills. Audio recordings of respondents' answers and observations during the research process confirm that the children predominantly understand the verbal instructions and use guiding questions, and correctly answer questions with one or more words. Difficulties are encountered with the grammatical formation of the questions, which the respondents compensate adding intonation to the questions. The difficulties are observed when starting a conversation and creating a story. Only in a few cases children were able to answer questions and expand the narrative according to the topic, demonstrating the understanding of causes and proving the point.
Overall, the respondents speak fluently. In some cases, the use of avoidance strategies are observed, when inconvenient answers get replaced with "I don't know", "maybe", etc. The respondents mainly answer the questions and relatively rarely develop a conversation. In general, the pauses during the speech are correct. However, in some cases they are prolonged, possibly a longer time is necessary for reflecting and recognizing the image.
Mostly respondents pronounce the sounds correctly. In this sphere some limitations are observed for two children. The incorrect use of gender for nouns, prepositions, and errors when characterizing the condition of the objects are observed in some cases.
Significant shortcomings are noted in the respondents' acquisition of reading skill. Often this skill is linked to the indicator "recognizes letters" without being able to recognize them in a printed text. Relatively rarely children are able to link the letters in syllables, however, without understanding the meaning of the word.
The data analysis confirms comparatively high results for pronunciation skills in Latvian for the second group of respondents. Children, whose daily language of instruction is Russian, following the example of the educator, are able to accurately repeat the sounds in Latvian and pronounce simple words, also emphasizing them correctly. In total, 3 out of 5 children demonstrate the ability to repeat accurately words emphasizing the first syllable. This leads to the conclusion that these children do not have pronunciation disorders. However, a lack of vocabulary and insufficient use of language is observed, which hinder a fluent involvement in the dialogue and create an effect of a foreign language accent. None of the children demonstrated the ability to start a conversation or ask questions. Children can only answer the question "What is your name?", and when looking at pictures of some known objects they can answer the question "What is it?". The missing Latvian words get replaced with words in Russian. Only greetings can be counted as speech etiquette in Latvian.
Also for the participants of Group 2, the limitations in their grammar skills are observed, as the particular learnt words were not used in the required declination or were not logically linked to other words in the sentence.
In the connection to reading skills, only one respondent recognized the printed letters and could read the syllables. In two cases the effort was observed for joining the syllables into words and for joining words into sentences. Correspondingly, for three respondents no reading skills were observed.

Conclusions

Researching children's language skills during the learning process is difficult due to many factors, such as linguistic complexity, individuality of the development processes, use of skills in everyday situations and in previously unfamiliar environment (Ehlich, 1996). Even if the research can only cover part of the language skills, it can still provide the insight into the language development of the child and develop an insight about the need for pedagogical and supportive activities (Groeben & Hurrelmann, 2002).

Responding to the research question about the language skills indicators for children educated in monolingual manner (Group 1), generally the results show a relatively high level of language skills development. In this respect, the considerable discrepancy in the development of dialogue skills can be considered as alarming.

As stated above, in accordance with the requirements of the regulatory framework, at the final stage of pre-school education children must be able to tell comprehensively and sequentially about what they have seen, heard, experienced, participate in conversation, use various speech intonations, etc. The study results allow to identify some significant deficiencies in the language development of research participants. This is the foundation for the conclusion on the need to perfect the didactic concept in pre-school education, focusing it on providing children with more opportunities for verbal expression.

The study results confirm the gaps also in respondents' reading skills. No respondents could comply with the regulatory requirements of the education system, which require that the child must be able to distinguish and name sounds, to mark sounds with appropriate letters, and to read the words understanding their meaning. It can be assumed that the possible cause of the identified deficiencies is also due to the organization of the research procedure, however, the conclusion on the need to improve the above mentioned language skills is consequential.

On the other hand, the language skills of bilingually educated children (Group 2) at the end of the pre-school stage are considered as insufficient for starting primary education. As stated above, in a bilingual primary education programme children must be prepared for learning 50% in Latvian and 50% in Russian, at the same time acquiring also a foreign language. But the language skills for children involved in this study do not correspond to the fluid language use stage, which is a potential risk for successful acquisition of the curriculum at primary education level. In this context, it can be concluded that Latvian language, if taught in separate classes a few times per week in the pre-school education process, is not acquired or gets acquired very incompletely if it is not supported through its daily use.

Plagiarism Rate = 9%

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Health Education - A Global Challenge on the Agenda of Teachers and Students in the "Knowledge Society"

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Abstract
The Health Education Curriculum was developed in a modular version, which aims to provide the user with a flexible basis for the application of the national Health Education program in the Romanian school, within the Curriculum Hours at the School Decision (CDS). In this paper I have tried to make a pleading in the favor of health education - one of the global challenges on the agenda of teachers and students. The paper presents the results of an opinion poll, on a sample of students from the University of Oradea, on the global challenges that concern them today, in particular. The problems related to health education are very high. The degree of culture of the population is also measured according to the state of public health of a country, according to the awareness regarding the health education (Marinescu et al., 2019). The quality of life of a people is also determined by its general health.
Keywords: Knowledge society, global challenges, education, health education.

Introduction

At the beginning of this millennium, we are convinced with each passing day that science and technology must be transformed into an indispensable ally of education, the bright colors of this association must be put and thought only for the benefit of man. Everything related to humanity: language, reason, feelings, art, morals, reading is achieved only through education. *Tomorrow's society is the effect of today's society.*

The holistic approach to education must include the formula 5C + 3F + N (the five components of education: ethical, intellectual, aesthetic, technological and physical; the three forms of education: formal, non-formal and informal; to which new education is added).

With or without our will, in the most varied of circumstances, it is natural to ask more questions: are we prepared to anticipate the accelerated pace of change in the ,,knowledge society" (contemporary society) ?; will we be able, under conditions of high pressure, to discern values of non-values ?; with the development of science and technology, what will our life be like ?; what are the destinations of performance in the field of science and technology ?; what is the place of education in the ,,knowledge society" ?; does the individual risk attenuating various forms of sensitivity with technological progress ?; which is our choice: towards progress, order, well-being, or on the contrary destruction and atomization ?; will humanity get rid of ,,a new Hiroshima" or "a new Wuhan" ?; Is health education the discipline of the future? Or, these realities require a value positioning and a clear attitude on our part. After asking these questions, it is clear that we do not have to accept everything. Selection, wisdom and discernment speak for themselves as long as there is reason. The democratization of social life also implies an influx of pseudo-cultural products, which escape the value standards (Marinescu, 2013: 18).

Currently, these are some questions that bother us, the educators, and at the same time, with our support, our students will take them, if not for solving, at least for awareness. We will perish or we will be offered products, behaviors, ideas that have nothing to do with: Beauty, Good, Truth, Freedom, Solidarity. Value competence has a positive echo for the present generation, but above all it has a major responsibility for the future of mankind.

It is trying to establish, to even clarify, the position of the "consumer" and the "producer" of science, technology and technology. The value competence is manifested in a particular way, depending on the characteristics of the questioned value perimeter. The "manufacturer" of science, technology and technology has increased responsibilities, realizing that there are investment and applicability thresholds that must not be exceeded.

Otherwise we are talking about disappointments, disappointments or even nightmares, which inevitably lead to ruptures, irreparable catastrophes, for example: biological and atomic weapons, ecological dissolution, the prospect of genetic monstrosities or pre-cellular organisms that can cause serious disease to humanity (the case of COVID-19) etc. The "consumer" of science, technology and technology is indicated to be both instrumentalized with what is new and efficient, and with what is new and beneficial to man.
But we must not forget for a moment that the school is a community delegated institution to transmit a certain system of values. The school resembles, in value, the society it serves. The second literacy, digital or technological, is not linear, but involves multiple interactions, convincing us each time that the school of today is focused on a real preparation for performance (skills, abilities intellectual and practical skills etc.), for the development of internal information processing mechanisms, so that we are not overwhelmed by the flow of information, but are prepared to make its selection, and to use the new information in useful activities at community level. and individually.

Method
Conducting an opinion poll among students on the global challenges on their agenda, to the question: "Which of the global challenges are you most concerned about today?" The indication was also to make an order of these problems. We worked online, on the e-learning platform of the University of Oradea, which can be accessed at https://e.uoradea.ro.
The main objective is to x-ray the existing situation at the level of the educational reality regarding the possession of some information regarding the global challenges of the students on their agenda.
Sample description
The sample consists of 320 students from the Faculty of Medicine and Pharmacy (107 students), the Faculty of Environmental Protection (103 students), the Faculty of Law (47 students) the Faculty of Informatics and Sciences (40 students) and the Faculty of Architecture and Constructions (23 students) from the University of Oradea. The most numerous respondents are medical students and environmentalists, the explanation being the interest of the survey subject and the larger number of students.

Table 1. *Percentage distribution of students by faculties*

Faculty	No. of students	Percentage
Faculty of Medicine and Pharmacy	107	33.43 %
Faculty of Environmental Protection	103	32.19 %
Faculty of Law	47	14,69 %
Faculty of Informatics and Sciences	40	12, 50 %
Faculty of Architecture and Constructions	23	7,19 %
TOTAL	**320**	**100%**

Answers obtained
The following situations were recorded, which we present hierarchically:
• in the first place are: combating CO-VID 19, awareness of the place and role of prevention, hygiene, compliance with the measures taken by the Government on compliance with military ordinances, the place and role of health education,
• on the second place were: the role of information selection, self-control, attitude and care for patients, seniors, research and discoveries in the top fields (technology, biotechnology, microbiology, molecular genetics, nuclear physics;
• on the third place appear: the greater attention paid to volunteering in the realization of health education, informatics and tele-informatics, nanotechnology etc.
• on the fourth place we register: ecological education (radioactive pollution, greenhouse effect, environmental legislation etc.), nutrition of healthy and sick people (Botea, 2019).

In conclusion, the concern of students and young people towards the fields: health education, tele-informatics, ecological education is noticeable. But there are many concerns also directed towards the sensitivity towards our peers: seniors, sick people, volunteering, practical-applied activities (both in the field of health education and ecological education, civic education etc.).
The boundaries between educational situations are not obvious: between them there is an osmosis and a continuity that is difficult to interrupt or to surprise pedagogically. In fact, it is one of the modern guidelines in the sciences of education, and not only.

Findings

For the Romanian society and the education system after 1990, *Health Education* has a special relevance, especially regarding the increase of the health degree, the increase of the quality of life, the reduction of some risk factors that lead to the appearance of some diseases, etc. Discipline Health education is an optional subject, being approved by Order of the Minister, no. 4496 / 11.08.2004 (Ministerul Educatiei si Cercetarii, 2004). The revised curriculum (for grades I - XII) was developed by the Ministry of Education, Research, Youth and Sports and the National Council for Curriculum and Evaluation in Pre-University Education, in 2007.
Regarding the place of the subject *Health Education* in the school of the present, but also of the future, to increase the efficiency of medical education we can note: the contribution to changing the perspective and vision of pupils / students on the present and future of school and medical institutions, and all decision-makers); contribution to the development of the (intrinsic) motivation of the pupils / students for the sanitary aptitude; increasing the efficiency of teaching-learning the discipline *Health Education* regarding the formation of intellectual and practical skills in pupils / students, etc.
The culture of the *Health Education* teacher is the result of the training and experience gained. The cultural horizon of the *Health Education* teacher is doubled in addition to the specialized culture and the psycho-pedagogical one, with a philosophical basis, which helps to form an overview of the world and its becoming, facilitating the understanding of the meaning and destiny of modern man (*Homo sapiens sapiens*). in the Universe. *Health education* is self-evident in a world marked by science, technology and technology.
In this super-technological society, the compulsory introduction of the discipline *Health Education* in the instructive-educational process must be correlated with the other aspects of education, which together lead to the cultivation of a true humanism, starting from attitudes and practical examples.
Today, at the beginning of the third millennium, when the life of the individual has become infinitely more complicated than before, leaving health education to chance would be an unforgivable mistake by posterity (Bucur et al., 2004: 14).

■ *Why the need for health education?*

Today's society, responsibilities, the individual himself moves faster, deeper than the end of the last century. The school, through its moral authority, can make a substantial contribution to the transmission of this educational knowledge for the health of pupils and students and has the ability and capacity to include and address, over time, a high percentage of the population.
The problems of the contemporary world, its challenges and the consequences in the field of education and health have led to the imposition and operationalization in theoretical-explanatory, but also practical-applicative, of phrases such as: lifelong learning and in the field of education for lifelong learning, lifelong education, lifelong health education, adult education and parental health education, self-learning, self-education and self-education in health, self-information and health education self-training, global education etc.
The education given by the school is no longer sufficient for the whole life of man. In the current context, we need a dynamic, formative education, centered on authentic values. In an attempt to meet the challenges of the contemporary world, one of the directions for restructuring the educational reality is: extending the educational act to the level of the whole life of the individual. Learning to learn and continually improve are the conditions of lifelong learning. Specialist studies have confirmed that the share of education and self-education varies

depending on the age of the subject. For example, education is predominant until the age of 10-12; between 10-12 years and 18-20 years the balance between education and self-education is balanced; after 20-25 years the ratio begins to be favorable to self-education. Therefore, during the formation of the young person's personality, education has a special significance, including the possibility to be completed through self-education.

The mission of the medical staff from Romania to fight the COVID-19 epidemic in Italy

The mission of the Romanian medical staff, selected on a voluntary basis, took place under the auspices of the *Civil Protection Mechanism of the European Union*, for a period of 17 days (April 7 - April 24, 2020). We remind you that Italy was one of the most affected countries by the coronavirus crisis, registering a large number of cases of infected people, deaths but also many cured cases. The Italian region of Lombardy was the most affected by the coronavirus in this country. Hospitals have had to reorganize in order to treat as many patients as possible, and the disease has so many forms that, every day, doctors have enriched their medical knowledge and experience by learning something new.

A team of Romanian doctors and nurses worked at the ASST Lecco Hospital, near Milan (Lombardy Region), together with Italian medical staff, to fight the COVID-19 epidemic. Doctors and nurses from Romania volunteered there and tried to save lives. Every patient who recovered was a great victory for the Italian health system. Romanian doctors (ATI specialists and medical emergencies) and nurses wanted to lend a helping hand to Italy, which hosts the largest community of Romanians, over one million, officially.

We want to highlight the collaboration and solidarity of Italian and Romanian doctors, through examples of dedication, passion and vocation in their collective work towards patients. Here is what diligent doctors and devotees said: Dr. Mario Tavola, director of the Intensive Care Unit at ASST Lecco Hospital: “We have gone from elegant, refined, Western medicine to almost a war medicine, without even knowing who the enemy is." Dr. Clara Ripamonti, head of the ATI department: “Experience has taught us that solidarity and collaboration are the force that has helped us move forward and helps us even now, even to increase the intensity of activity and increase the workload. The loneliness and collaboration of a group is the strength at the moment”. “Basically, our working day was 18 days (i.e. the period during which they helped in Italy)”, says Dr. Dragoș Botea, and continues “I wanted to leave even before the state of emergency was declared in our country in country, but I couldn't. I had colleagues and medical friends in Milan, from whom I received therapeutic guides, I wanted to return their help ", confesses, with great devotion, the Romanian doctor.

Fig. 1. The Romanian team together with the Romanian Prime Minister

Source: https://www.digi24.ro/stiri/actualitate/misiunea-medicilor-romani-in-italia-s-a-incheiat-se-intorc-acasa-si-aduc-materialele-donate-de-papa-francisc-1297385

Upon returning to the country, the Romanian medical team was greeted by Romanian officials (Prime Minister, Minister-Secretary of State, Minister of Interior, Minister of National Defense, Italian Ambassador to Romania). “I especially wanted to be present here when the formidable team of doctors returned to the country, nurses who voluntarily worked in Italy for 17 days and in solidarity were with the medical staff in Italy and the Italian patients in the battle against COVID-19. I convey to them my respect, my appreciation and I thank them enormously for the fact that they transmitted an extremely beautiful image about Romania, not only in Italy, but at European level. I congratulate them and wish them success in their careers", said the Prime Minister.

Results, Conclusions and Recommendations

In this paper, we have tried to achieve a global and synthetic vision of health education - one of the global challenges on the agenda of teachers and students, but of the entire population. In a modern society. The degree of culture of the population is also measured by the state of public health of a country, by the awareness of health education. The quality of life of a people is also determined by its general health. The purpose of Health Education is to improve and maintain the health of the population.

The curriculum of Health Education in pre-university education was developed in a modular version. The modular organization aims to provide the user with a flexible basis for the application of the National Health Education Program, within the Curriculum to School Decision (CDS) classes (Marinescu et al., 2017a; 2017b).

Health education takes place at three levels: informal, non-formal and formal:

- at the informal level, *health education* targets those behaviors from the conduct of individuals that are formed through personal experience and imitation (primary socialization of the individual); in this case, *health education* does not involve a systematic effort to transmit knowledge and to train appropriate behaviors; it is about spontaneous actions and influences that are exerted on individuals in the family and in other compartments of the social environment;
- at a non-formal level, *health education* consists of a set of actions and socio-medical influences organized in an institutionalized environment, outside the general or actual medical education system;
- at a formal level, *health education* includes a set of organized and systematic actions that take place within the specialized medical education. (Blandul, 2014).

  The need for *health education* among pupils / students is imposed by its purposes, i.e. maintaining and maintaining the health of the population.

Post scriptum: Towards a postmodern society

By mastering the specialized knowledge regarding *health education*, we can preserve, strengthen and prolong the health condition until deep old age, living a balanced, active, pleasant life useful to us and to the society in which we live.

Our arguments regarding the place and role of *health education* raise some issues that need to be clarified:

♣ *To what extent does health education sometimes remain only a type of education in new education and is not yet constituted as an astringent reality of the present?*

♣ *Is health education, in the local community, in the European community (currently globally) a constructive reaction in relation to the current status of modern man and education in general?*

♣ *In what form is health education presented in the Romanian society (but also globally) - in general its educational practices - and what influence do they have, especially in crisis situations?*

There are as many arguments in favor of a closer awareness of the theory and practices of *health education* that underlie and shape this approach. There is more and more talk about achieving a permanent *health education*, so necessary nowadays.

We sign together students, doctors, teachers, etc. reminding us of Rablais's words: *Medicine without conscience is the ruin of the soul!* Let's reflect! .....

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Plagiarism Rate = 0%

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INTERNATIONAL CONFERENCE ON LIFELONG EDUCATION AND LEADERSHIP FOR ALL

Pedagogical Aspects of Awareness Formation of Visual Art Language

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Abstract
The education topicalities determine the need for comprehensively educated people who are able to work within a wide range of activities, accepting new spheres through learning and development (Fadels, Bialika, Trilings, 2017). Art pedagogy is interdisciplinary, and it fully reveals the mutual integration tendency of various disciplines, which is characteristic to contemporary education in general (Cohen, 2020). Raising awareness about the artists' creative pursuits, application of various materials and techniques in the process of artistic activity – these are the issues that have always been in the centre of attention of art educators. The research object: artistic activity. The research subject: awareness formation of artistic activity. The research methodology is developed referring to the topicalities of current transformations in education, the findings of scientists, the opinion of professional artists about the artwork creation process, and research studies on the practice of art pedagogy from the perspective of emerging teachers. Considering the above mentioned, the following research question has been put forward: What pedagogical aspects can be influenced by drawing students' attention to the issues of comprehending the visual art language. In turn, the inclusion of artworks in the pedagogical process facilitates the transition from monologue to collaboration helping students to understand the diverse perspectives of human existence. Works of art give the teacher the opportunity to present the events that happened in the past and develop an understanding of personalities and a particular era. The obtained research results can become a basis for further research.
Keywords: Visual art language, art perception, artistic activity, visual art in education.

Introduction

In the Sustainable Development Strategy of Latvia until 2030 the attention is drawn to the fact that along with the accumulation of specific competencies and qualifications that determine a person's ability to enter the labor market and build a successful professional career, education is also a development process of human talent, emotional and social intelligence and personality (Sustainable Development Strategy, 2010). This also applies to the actualization of the importance of learning the visual art language in the general education process. K. Robinson, an internationally recognized expert in promoting creativity, innovations and human abilities, actualizes the discussion that education is not and has never been an objective process of developing natural abilities. The author notes that the education for masses is justified by the prevailing economic vision and the phenomenon of academic knowledge inflation. On the other hand, human feelings and opinions, values, motivation and aspirations are often ignored. The scientist believes that it is the existing education system that causes staff-related problems in the enterprises, businesses and public institutions, thus affecting both professionals and those who do not have particular qualifications (Robinson, 2013). This points at topical issues and existing problems in the field of education in general.

The events and challenges of the 21st century raise the need for creative, adaptable and innovative professionals. This has a significant impact on the implementation of appropriate changes and on shifting the emphasis for the implementation of educational content in general education institutions. In this context, the development of interdisciplinary knowledge, as well as the development of students' skills and character are important aspects in the curriculum implementation process, so that during the school years the pupils learn how to acquire knowledge throughout their lives (Fadels, Bialika, Trilings, 2017). At the same time, every person as a member of the society, has the right to development and participation in the economic, social and cultural spheres in accordance with the structure and resources of each country. This position stipulates that everyone have the right to participate freely in the cultural life of society, as well as to enjoy, create, perceive and understand art in a meaningful way. R. Cohen, the vice president of research at Americans for the Arts, points out ten important positions why art plays an important role in human life and society as a whole. According to the research results obtained by this author, the most important aspects are the following: art has a potential to unite the society and help people to understand better other cultures, it improves the well-being of individuals, raises students' academic performance, strengthens economy, promotes tourism, stimulates creativity and innovations, drives the development of creative industries, improves the student's well-being and lowers the poverty level, improves health care, as well it has a positive impact on the health and well-being of the military (Cohen, 2020). These research results are linked to art's complex ability to positively influence the results of the pedagogical process and human life in general, as well as to interact with different fields.

Also in Latvia, art scientist and pedagogue J. Anspaks expresses the opinion that in the pedagogical process the orientation on art values helps the students to overcome rationalism in personality development, and it forms a new perspective on real life situations and communication, exploring basic cultural values and processes of practical activities (Anspaks, 2004). It goes hand in hand with the teacher's ability to form creative personalities who are able to critically perceive and explore the world around them, imagine, fantasize and express themselves emotionally, realistically evaluate the life situations and challenges, as well as actively participate in various spheres of human activity. Thus, it can be concluded that visual art has a significant pedagogical potential, it has an interdisciplinary, practice-oriented nature and it fully reveals the possibilities of interaction between several disciplines. Keeping in mind the above mentioned, the essence of visual art language and the aspects of its impact are further studied in more detail.

The language of visual art

Raising awareness of the visual art language is one of the means for implementing the topicalities of the 21st century in the general education context. From a historical point of view, a reference can be made to the study of the historian, philosopher W. Durant on the ideas expressed by the famous ancient thinker Aristotle about the essence of art. W. Durant calls one's attention to the ideas of Aristotle on the influence of art on both human intelligence and feelings. In the above-mentioned findings, W. Durant particularly emphasizes Aristotle's thought that the most important task of art is a catharsis, purification, so that a person can gain excitement and joy, pointing out that art has an essence of almost a mystical power (Durant, 2012). This confirms that the importance of art has been appreciated in all times. The influence of the visual art language primarily lies in its imagery. The embodied art image is the main basic unit in a work of art. In the image of art, individual peculiarities are manifested in features that are characteristic to one's time, everyday life, social group, a nation. In psychology, the term "image" is seen as a subjective phenomenon that arises as a result of practical, sensory perceptual thinking, which is a reflection of reality in which the most important categories (space, movement, colour, shape, texture, etc.) coexist simultaneously. In terms of information, the image reflects a voluminous representation of the surrounding reality (Psiholoģijas vārdnīca, 2004). The concept of artistic image can be defined as a product of creative imagination with the following main characteristics: emotional experience (empathy), vivid associative image and reflection. Thus, it can be concluded that in the implementation of the pedagogical process the image can be used as a source of cognition also for such objects that are not directly observable, but can be attributed to a person's inner spiritual essence, the reality of the surrounding world, and emotional atmosphere and ambience of the nature.

In addition, the image can serve as a source of cognition not for a passive but for an active artistic activity. The artistic image always includes the emotional assessment of the author's surrounding reality. As a result, it can become a stimulus and a source of the performance appraisal for many types of pedagogical activities, for example, in upbringing. The art image is creation of a new ideal object that promotes the transformation of reality and at the same time the creation of a new reality. The art image is, by its very nature, a sign, a visual language between an artist/author and a viewer, reader, or listener. In this dialogue, the image of art, developed through visual language techniques, becomes an integral part.

The inherent qualities of the visual art language are often related not only to the artistically imaginative representation of reality, but also to its social, unifying meaning. The prominent Russian psychologist L. Vigotsky has written that art is a social technique of feelings, a tool for involving the society in the most intimate and personal areas of our existence (Vigotsky, 2016). This corresponds with the opinion of the scientist K. Robinson that artists do not simply express feelings in the created works of art, but they express ideas about feelings, searching for the forms, connections and a meaningful vision of life through the means of visual language expression (Robinsons, 2013). It can be concluded that a direct analogy is formed between the acquisition of visual art language and the processes of artistic and pedagogical activity, promoting students' personality development within a harmonious whole. Therefore, also pedagogical activity, just like art, is aimed towards building humane relations between people.

In the research context, it is important to emphasize the idea of the philosopher H. G. Gadamer on the language of visual art and artistic activity as a universal form of human communication. According to Gadamer, as time goes on, art has a significant impact on all public life, sometimes abandoning figurative traditions and understandable forms of expression from its artistic language, becoming completely incomprehensible and problematic. Art history offers countless examples that demonstrate abandonment of tradition or a customary and socially accepted setting. For example, at the turn of the 19th-20th century, the impressionists renounced the naturalistic correctness, trying to reveal the overall impression of the work of art by applying a technique of separate small strokes following the colour gradations created by the ambience. This example marks a change in the development of visual art language. It should be noted that at the beginning of the 20th century artists dramatically expanded the range of techniques when creating their works of art by gluing paper, fallen leaves, pebbles and other materials on their paintings, creating unique collages to convey the message to the viewer as differently as possible. Art historian Nadeije Laneyrie-Dagen rightly describes the new trends in art as the bankruptcy of traditional systems. The author points out that the paintings created in the form of a collage, installations, photo reproductions, videos and films created an irreversible time of change (Lanerī - Dažāna, 2005). Thus, the development of the visual art language facilitated the expansion of the boundaries of art, gradually changing the perception of art in society. The development of the visual art language and its enrichment takes place through interactions with other disciplines and interdisciplinary research.

The well-known abstractionist V. Kandinsky (1866-1944) studied the relationship between the art and music. According to the research of art scientist R. Cumming, V. Kandinsky has admitted that the colour is the piano keys, the eyes – piano hammers, but the soul – the very multi-string instrument. V. Kandinsky believed that the artist is the hand of a musician who plays one scale after another, awakening the thrill in the soul (Kamings, 2000). Thus, in line with the artist's theoretical findings, the compositions developed in which each line and colour obtained its own independent psychological significance. For example, the abstractionist V. Kandinsky describes broken lines as youthful, but curved lines as mature, but a dot within a small circle he characterizes as a small space, equally closed from all sides. It can be noted that the theory developed by the artist about the emotional and spiritual effects of colours still carries important information for developing the visual language awareness of future artists and teachers (Kandinsky, 2011). It is possible to conclude that the visual art languages, by their very nature, incorporate inexhaustible possibilities, encouraging everyone to explore, discover, feel and create.

Perception of an artwork

K. Wilber, a developer of integral theory, says that to understand the work of art, we must try to comprehend the original sense and meaning that the artist has placed in his/her work. At the same time, the author notes that the intention to "reconstruct" and "restore" the artist's idea is a very delicate, difficult and maybe even impossible task. However, according to the scientist, there is no reason to ignore such an intention (Wilber, 2004). In the artwork, synthesizing various activities and using a variety of attributes, the artist reflects people's attitude towards the reality and themselves. Thus, several aspects need to be emphasized in the artwork perception process. It must be taken into account that each culture has its own national peculiarity, and if it is protected and preserved in the works of art, then national values emerge reflecting the peculiarity of a nation. Without recognition of national, the universal cannot exist in the art (Postažs, 2009). The opinion of the artist P. Postažs resonates with the formation of the human value system. Besides, the art and its language, covering a wide range of disciplines and stylistic possibilities, is able to accumulate and reveal the originality of traditions, feelings, ideas and various historical stages in the development of human culture. This is important for humanity, where the national peculiarity is mixed with the universal.

Scientist H. G. Gadamer emphasizes the tendency of modern visual art language to reduce the distance between the viewers, consumers and the audience by experimenting, improvising, inviting to participate and confusing the spectators (Gadamers, 2002). This actualizes that in the process of art perception the language of art does not directly reflect the external appearance of things, but their internal significance, giving a person an insight into the reality of real life. The perception of art in the society has always been reinforced by media-inspired myths and legends about artists, their lifestyles, their clothes and their behaviour. At the beginning of the 20^{th} century, the artists expressed a dissatisfaction with the academic education through changing the styles and directions of generations and modernism, criticizing their time, denying its values, thus showing resistance to the mass culture. In the beginning of our century, the society rated the artworks of the conceptualist D. Hirst as particularly controversial. One can refer to the work of art "For the Love of God" (2007), when the artist created a diamond-encrusted human skull, thus showing the most unpleasant and absurd, as well as provoking, insulting, annoying and challenging society by visual art language means of expression. The work of this artist raised several questions related to the perception of the work of art: what is art, what is the meaning of the work of art, does art have boundaries, what is the task of the artist and art, how is contemporary art perceived by the society?

The technological developments open up more and more new possibilities for the creation of unprecedented art products, such as animations, videos, manipulation in the digital environment, interactivity, and synthesis of arts using sound, movement, light and images. It is an opportunity to unite the elements of the art language in a peculiar synthesis. Creativity expert K. Robinson points out that nowadays millions of people around the world have acquired unprecedented means for expressing their creativity in the language of sound, design, science and art. According to Robinson, if an artist handles the video camera, the film can be as emotionally touching as a painting created with a brush and oil paints (Robinsons, 2013). This is a time of challenges and benefits, when the integration of new technologies in the context of the visual art language creates both advantages and threats in the perception of art products created during the formation of human value system. Gradually, as the experience of humankind accumulates, the tasks of education, life and art become more complicated. In turn, the teacher, when implementing the pedagogical process, must be able to purposefully select and include the works of art and artistic practical activities to provide the relevant pedagogical functions, such as encouraging the cognitive processes, understanding of aesthetic values, solving the upbringing issues, promoting interests, and providing support in professional or general education.

Artistic activity in the artwork creation process

When creating a work of art, the artist "outlines" or expresses the world of his/her consciousness in the form of signs. By translating the phenomena of reality in a particular form – in the form of an artwork, the author implements the artistic reflection of his/her world – the artist's world, and expresses his/her vision using the means of expression available. J. Pujats, the Cardinal of the Roman Catholic Church, has commented on the work of artist V. Bušs saying that this artist is not satisfied just with the representation of the outer shell, but he tries to delve into the essence of the particular phenomenon, thus giving its fullest possible interpretation. According to the Cardinal, the art created by V. Bušs grows from a deepened aesthetic attitude towards reality – the homeland, countryside and cities, work of the people. The world of emotions, proving his bright thoughts and liveliness, flourishes, and an art form develops full of inner excitement (Bušs, 2014). By "reading" the text of an artwork, the viewer understands its content and, depending on his/her knowledge of the language of art, creates an appropriate image of art in his/her consciousness.

The artist's activity is daring and it also encourages to participate in the process of creative activity. Artists are experimenting, looking for new solutions, thus expanding the range of techniques in creating a work of art. The famous painter P. Picasso notes that the aim of the paper collage is to reveal that diverse materials can be utilized when developing an idea, so that they become a reality in the work of art. As the artist suggests, a strip of newspaper never served for picturing a newspaper, but to depict a completely different object – a bottle, a violin or a face. Thus, no element is utilized in the context of its direct meaning, but always outside its usual context, aiming to contrast its natural appearance with its new function. Representatives of the modern art direction expressed the opinion that if a newspaper strip can become a bottle, it encourages reflection on newspapers as well as on bottles. The artists wanted that audience would pay attention to this situation (Žilo, Leiks, 1991).

Art scientist R. Cumming, studying the peculiarities of artistic activity in the works of individual masters, reveals the peculiarities of the artist's handwriting style. Thus, he points out that the artist P. Klee (1849-1940) experimented with a diverse range of techniques, creatively and sensitively using different textures generated by different materials and paper. The artist initially covered the canvas with plaster, and then painted on it with watercolours, finally supplementing the artwork with various scratches. For example, according to R. Cummings, J. Pollock (1912 - 1956), creating his art, used drops or spatters of paint, using instruments such as sticks, dried paintbrushes and even confectionery syringes filled with the paint (Kamings, 2000).

In turn, the artist L. Kokle was one of the first in Latvia, who enriched the traditional technique of arsenal painting, using a putty spatula for creating voluminous textures resulting in interesting light-shadow play; he created beautiful and bright colour combinations, unusual but consistent, always choosing a particular tone (Konstante, 2005). Thus, the artistic creativity is able to encourage and expand the possibilities of our visual language, using a variety of techniques. Creativity expert K. Robinson rightly argues that artists are the ones who create unique forms of expression (Robinsons, 2013). Thus, we can conclude that the teacher has a wide spectrum of pedagogical activities in order to teach the language of visual arts to the pupils in an interdisciplinary context.

Artistic activity is a special form of pedagogical activity, which has general features, as well as it is closely related to the development processes of human nature. Its specificity is determined as an objective presence in the relationship system of "teacher - pupil", when it is purposefully used to address the issues of pupils' development, education, upbringing, support and socialization. The artistic activity can become an essential tool in the general education process, as well as an addition to the various forms of pedagogical work. Considering the above mentioned, the following research question has been put forward: What pedagogical aspects can be influenced by drawing students' attention to the issues of comprehending the visual art language.

Method

In this study, the awareness of the visual art language and pupils' creative artistic activities are viewed in the context of general education. During the implementation of the pedagogical process, the teacher has a possibility to choose samples of different visual art types in the historical and modern art context, to integrate the experience of artists' creative activity using various forms of work for the implementation of pedagogical tasks. The research object: artistic perception and activity. The research subject: awareness formation of artistic activity. The objective of the article is to actualize the creative pursuits of artists in the awareness formation of visual art language in pedagogical discourse for enriching students' visual proficiency and cultural awareness. The research methodology is developed referring to the current educational transformation topicalities in different documents, the findings of pedagogues, psychologists and other scientists on the pedagogical significance of art, the opinion of professional artists in the artwork creation process, and research studies on art pedagogy practice from the perspective of emerging teachers.

Findings

Exploration of the significance of learning the visual art language

Describing the essence of the visual art language, the artist V. Bušs believes that art in all its diversity and versatility is not just for entertaining the people. According to the artist, it can provide a great excitement that not only makes one or more people mentally mature and stronger, but also empowers even a whole nation to overcome the most difficult moments of its existence (Bušs, 2014). The author conducted a survey to explore the future teachers' understanding of the importance of visual art language in the context of the pedagogical process. The objective of the survey is to actualize the awareness of the potential possibilities of the visual art language from the point of view of emerging teachers. The group of respondents - 30 students of the Year 2 and 3 of the professional bachelor's study programme "Teacher" of Liepaja University (Latvia). The survey was conducted on May 28, 2020. The results of the study are revealed in Table 1.

Table 1. The importance of understanding the visual art language

Respondents' answers	Number of respondents	Results (%)
Development of creative activity	30	12
Emotional enrichment	30	10
Stimulation of imagination	30	10
Expression of emotions	30	8
Aesthetic enrichment	30	8
Expression of experience	30	8
Mental health promotion	30	7
Building intercultural interactions	30	7
Intellectual enrichment	30	6
More objective understanding of works of art	30	6
Universal language for conveying a message	30	5
Knowledge enrichment about artistic means of expression	30	5
Formation of understanding about human experience	30	5
Relaxation	30	2
Leisure time activity	30	1

According to the respondents, the understanding of the visual art language in general education mostly promotes the development of a creative activity - 12 %; followed by emotional enrichment of the personality and the stimulation of imagination - 10%; while 8% of respondents say it is needed for expression of experience and emotions, and for aesthetic enrichment process. 7% of respondents stressed the role of visual art language for promotion of mental health and intercultural interactions, 6% related it to students' intellectual enrichment and more objective understanding of artworks, but 5% of respondents see the visual art language as a universal means of communication among people, knowledge enrichment about artistic means of expression, and awareness of human experience. The respondents have assessed relaxation (2%) and leisure time activity (1%) as less significant. These results reveal that the emerging teachers understand the importance of developing the visual art language awareness in the context of general education. Thus, the survey results are in line with the theoretical knowledge of pedagogues, philosophers and artists.

Exploration of artwork perception

The artwork perception process can be considered as one of social communication forms in which non-verbal information plays a key role. According to the philosopher V. Agejev, each of the art forms employs only the set

of means of expression characteristic to it and determines the peculiarities of a dialogue, in which the viewer participates as a person who perceives the information offered to him/her (Agejevs, 2005). In the art perception process, the imaginative thinking mechanisms play a key role in understanding the diverse angles of human existence. Researching the understanding of the essence of an artwork and its perception, the author explored the comments of Year 3 students of the professional bachelor study programme “Teacher” of Liepaja University (Latvia) (on May 20, 2020).
The future teachers acknowledge the following:

- I perceive the work of art as something gorgeous, rich in emotions.
- An artwork is a product of expression, in which we can see the features characteristic for particular artist's work, the reflection of historical events, the existing social order and other things.
- An artwork is a work in which the author purposefully, intentionally, imaginatively and aesthetically displays his/her feelings, emotions, surrounding events.
- An artwork has no boundaries - it can be a reality or a fantasy, as well as a combination of reality and fantasy.
- An artwork is the artist's message to the viewer, which tells a story without words. It can be direct or hidden.
- An artwork is a person's inner voice; display of emotions, feelings, thoughts in the chosen form of artistic expression.
- Artwork is able to take you to another dimension.
- Works of art live for years and centuries, they are passed on from generation to generation, and we can often see them in collections of art galleries, as well as we see how people's lives and art have changed.
- I perceive a work of art as a subtext and feelings that the artist shows and expresses, which are unconscious and cannot be expressed in words. That is why one story can be represented so differently, as it is differently perceived by each artist.
- I perceive the work of art as the author's inner feelings, fervent desires and fantasies. The works of art express what the author may not even be able to talk about.
- In my opinion, each work of art says something about the author's deepest feelings, which he/she reveals to the public. Of course, some of the authors in his/her works of art might share his/her life experience. There can be all kinds of works of art, and I think that in the future they will surprise us more and more.

Thus, we can conclude that in the process of artistic perception, the information and knowledge is transferred to the recipient. In the works of art, the reality is often altered, and their nature is emotional. The artwork perception process requires studying the subject/object/phenomena, the content included in the work of art, and the means of artistic expression. The answers show respondents’ understanding of the process of artistic activity. Here the parallels of visual art with pedagogical activity are marked, the essence of which is revealed in the development of experience, stimulation of imagination, formation of cultural understanding in order to form everyone's personal view. Each person’s emotions are related to an individual experience that has a unique and unrepeatable character.

Exploration of awareness development of visual art's language in the pedagogical process
According to the educators, philosophers, artists (Agejev, Anspaks, Bušs, Gadamer, Postažs), knowledge of visual art is an important part of everyone's life, as well as an important source for getting to know a culture. In turn, when getting to know the culture, a person begins to understand his/her relationship with it, acquires more objective knowledge about oneself, it encourages creative expression of ideas and gives ability to critically evaluate the creative artistic activities. A teacher can employ various activities for promoting artistic activity perception of works of art. In order to find out the visual art language forms in the educational process, the

author conducted a survey in Liepaja University, Bachelor's study programme "Teacher" (on May 15, 2020). The survey results are reflected in Table 2.

Table 2. Visual art in the education process

Activity form	Remarks
Exhibitions	To organize joint exhibitions of professional artists, teachers and pupils at school, art gallery, or online environment.
Revival of works of art	To create the environment depicted in a work of art, to copy the postures, clothes, accessories of the depicted people and to capture it in photographs and create a video.
Creative afternoon together with family	After the school, students, parents, teachers, brothers/ sisters, grandparents work together creating and artwork in visual arts.
Artists' master classes, creative workshops, guest lectures	Lessons/extracurricular activities are not led by a teacher, but by a well-known/lesser-known artist who tells, shows, teaches about his/her work, encourages pupils, gives advice.
School interior design	I believe that a great activity would be painting of walls at school. I know that the school management tends to be against such ideas, but I find it fantastic. The schools are for pupils, and it would only be nice if they were allowed to get involved in drawing on the school walls, making their own environment more interesting. In addition, such activities tend to interest pupils and they might choose to pursue art in their future career.
A walk in nature	Pupils are given the task to go for a walk and take photos of objects, nature sights, etc., which, in their opinion, would be worth compiling in the book "Latvian Cultural Identity 2020" created by the pupils. Each student participates in the compilation of a joint "book", adding to it one work of art, based on what he/she has seen and felt in his/her immediate surroundings. It can be done in e-book format.

In Table 2, the author has summarized only some creative artistic activities in order to provide an insight and encourage a further action during the implementation of pedagogical process. The expressed ideas confirm the future teachers' understanding about the possibility to include specific artistic activities in the general education practice, envisaging the possibilities to model activities according to the real situation.

Conclusions

The visual art language is emotional communication between the people, and it functions as a special information transmission and exchange system between the contemporaries and eras. It is a language in which the artist expresses his/her feelings and experiences as well as opinion about various phenomena of life in the form of images. It talks about its time, customs and achievements. It can be described as a signalling system through which one generation passes on its experience to the next.

The language of visual art acquires its expression in accordance with thinking and emotions, feelings and imagination, addressing the subconscious, indicating to a person the meaning and goals of his life, helping to understand the world and oneself. Keeping in mind the complex impact of visual art on people, it can be concluded that it has a pedagogical potential and is an important part of education.

The works of art, reflecting reality in artistic images, do not copy reality, but transform it by modifying it using a special composition of time and space. The artwork perception process results in the development of emotional attitudes and enrichment of the world of emotions and feelings. In turn, the inclusion of artworks in the pedagogical process facilitates the transition from monologue to collaboration helping students to understand the diverse perspectives of human existence. Works of art give the teacher the opportunity to present the events that happened in the past and develop an understanding of personalities and a particular era. Similarly, also students' artistic creations can reveal the uniqueness of an era that is studied in the educational process.

It is the uniqueness of the artist's personality and his/her peculiarity of perception that develops in people the ability to look at simple things differently, from a different angle. Thus, it can be concluded that the artist's task is to find a basic thought of his/her time - a thought that is not vanishing, a form appropriate for his/her time, a set of means of expression, which is the most objective testimony to the time when the artwork is created. In turn, educating to perceive the surrounding environment is one of the most important tasks of pedagogy.

The teacher has an opportunity to implement a variety of creative artistic activities, forms of work, use different materials and techniques in the pedagogical process, as well as apply new approaches in order to help each student to find their areas of interest, develop a meaningful understanding of visual art language, its means of expression and artistic activity.

Plagiarism Rate = 14 %

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Resources of Students' Creativity for Competence Approach Implementation in Higher Education in Latvia

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Abstract
Creativity - the topmost resource for successful competence approach implementation and education content reform procedure in Latvia, implemented on all education levels in early 21st century. Aim of research is to analyse creativity in 4 higher education programs – pedagogy, economics, art and psychology, based on *Four-C* Model (Kaufman & Beghetto, 2009): *Small-C* as everyday creativity as problem-solving in everyday life and/or work; *Mini-C* as a skill developed during study process; *Pro-C*, manifested as high professional competence, and *Big-C* – outstanding creative achievements. Approach of mixed methods applied, using methods of quantitative and qualitative data acquisition and data processing: outcomes of questionnaires analysed for programme's quantitative data processing in SPSS environment, but outcomes of focus group discussions for programme's quantitative data processing in AQUAD environment. Results of research confirm statistically significant differences ($p \leq 0.05$) in students' creativity, depending on education program: *Small-C* and *Prof-C* dominate for pedagogy, but *Mini-C* – for art education programme students.

Keywords: Creativity, Study Programmes, Study Process

Introduction

In the 21st century creativity is considered as one of human core values (Hondzel & Hanses, 2015) and most essential resources (Kaufman & Beghetto; 2009); great importance has been attached to it, since national development strategies, based on politics and orientated towards innovations, are being implemented in order to solve successfully the modern problems created by climate change, terrorism, social stratification as the consequences of income inequality and others (Shao et. al., 2019).

In the context of the education content reform creativity for the competence approach implementation in Latvia is part of scientific thinking, entrepreneurship, design thinking, mathematics, the most important skill and management quality in order to work out innovative solutions to multiple the 21st century challenges (Fadel et al., 2015), on the basis of the positive correlation identified in scientific studies between creativity and learning efficiency (Khodabakhshzadeh et al., 2018).
Simultaneously, causes are identified which inhibit creativity among which the most important are study programmes, lack of support for teachers, also the interpersonal factors such as reluctance to change and get changed (Hocenski et. al., 2019).

In the higher education space the concern is expressed about the low assessment of creativity potential, as students are tended to underestimate rather than overestimate their creative abilities (Kaufman et al., 2016), also it has been forecasted that if the creative potential is clearly defined and measured, the world will become a better place for everyone (Runco, 2016).

Due to the analysis of various creativity models, the most essential variables of creativity are the skills related to the area (knowledge on the particular field and its application), personalities (tolerance, self-discipline, willingness to take risks, etc.) and task motivation (particular or profound interest in the task) (Kaufman & Beghetto; 2014).

Creativity needs both originality (novelty, uniqueness) and efficiency (usefulness, suitability, values, meaningfulness) (Runco & Jaeger, 2012), highlighting two creativity processes: the process of generative information and knowledge acquisition and their merger for new idea creation, as well as the research process in which the knowledge is searched for useful idea combinations and viability assessment of the potential solutions (Chua et al., 2015).

Creativity in its manifestations is related to the unexpected, surprising and impressive, activating new kinds of thinking in the education context, creating innovative, different and dynamic context, in which one can develop ideas, create products and interact with others in various ways. In its turn, study programmes obtain some innovative features, when the unexpected enables us to make new links between creativity and education, clearing the never-ending unexpected, surprising and impressive ways for navigation which, in its turn, provides unlimited learning opportunities, moving away from the regulations stated in the course and study programmes and enabling us to establish unexpected, original and new relations between the prescribed knowledge and the knowledge that flows. Links provide power, whereas knowledge is a valuable tool for decision making on a daily basis, social networks, academic education and future career. The good practice in the study programmes is a wide range of visits in unpredicted places, which is orientated towards creativity promotion in higher education, for instance, both in the virtual and traditional library where students encounter new knowledge, original ideas, alternative perspectives and unprecedented offers what to read, do and doubt. The unexpected offers elements for innovative education contexts in which the didactic triangle can be seen from another point of view, offering an opportunity to recognize the teachers and students' creative potential and at the same time the dynamic and complex character of the study programme content (Elisondo et. al., 2013). In most part of the creativity studies one of the two directions is usually highlighted: everyday creativity (*Little-C*) or outstanding creativity (*Big-C*). Everyday creativity can be achieved by almost anybody – work, which is acknowledged and evaluated as creative, creative solutions for problem-situations in daily life and at work. Whereas outstanding creative achievements have stood the test of time and history and are important for future generations, where creativity is shown as an interaction between the domain, field and person who creates the idea, theory or piece of art which is accepted by the field (educators, critics) and embodied by the domain. The *Big-C* concept is less useful in real and practical situations, as time distance is necessary for the assessment (Kaufman & Beghetto, 2009). The *Big-C* and *Little-C* creativity concepts are not sufficient in order to perceive fully the complex character of creativity (Kaufman & Beghetto; 2014).

In the *Four-C* model (Beghetto & Kaufman, 2014) the types of creativity follow the development trajectory , marking at least two transition periods, and *Little-C* is not anymore only a synonym for "everyday creativity," since the idea of everyday creativity in the whole *Pro-C* can expand from *Mini-C* to *Little-C*; only *Big-C* remains as "outstanding creation" (Kaufman & Beghetto, 2009). In this model *Mini-C* or personal creation comes first that reflects the subjective self-discoveries, which is part of the study process, and is defined as a new and personal interpretation that is based on individuals' activities, experience and events (Elisondo et. al., 2013). Other people do not consider these new and personally significant ideas and interpretations as creative yet, but they under appropriate conditions can turn into a creative investment which is acknowledged by others (Beghetto & Kaufman, 2014). Moreover, teachers, parents and mentors can help *Mini-C* creativity develop (Kaufman & Beghetto; 2009). *Mini-C* is a dynamic, personally significant process of interpretation, which is new for every individual and changes human experience, activities and events in a new understanding in the context of particular social environment; its assessment is always subjective (Elisondo et.al., 2013). Incorporation of *Mini-C* in the model is directed towards the problem-solving, it also helps to eliminate the failure of students' creative potential application and its loss, emphasizing how important it is to be aware of creativity, which is typical of students' unique and personally significant findings and interpretations, acquiring a new subject. Thus *Mini-C* creativity category helps to expand the current creativity concepts, admitting that they are interpersonal findings and interpretations which often reside only in the creator, are still considered as creative activities, highlighting the interpersonal and more towards the process directed creativity aspect (Kaufman & Beghetto; 2009). Even though *Mini-C* is the lowest level of hierarchy- self-revelation can obtain personally meaningful findings and interpretations, which are also characteristic of the study process, at the same time it may also serve as a natural transition to more mature and efficient creativity forms *Pro-C* and *Big-C*.

Pro-C or experts' level creativity is related to the practice and is the result of hard work and experience; this level can be the highest which most people can aspire to and achieve during their lifetime. *Pro-C* is more superior achievement than everyday creativity, it is a high professional competence (Kaufman & Beghetto, 2014).

The research "Resources of Students' Creativity for Competence Approach Implementation in Higher Education in Latvia" has been carried out with an intention to analyse students' creativity of the pedagogy, economics, art and psychology education programmes.

In order to achieve the goal of the research, the following research issues were raised:

1 Are there statistically significant differences in the students' creativity self-assessment depending on the educational programme?
2 Are there any close correlations between the creativity criteria - *Little-C*, *Big-C*, *Mini-C* and *Pro-C* identified due to the theoretical analysis?

Method

In the research 2019-2020, 239 respondents from 5 higher educational establishments took part: Rezekne Academy of Technologies, Liepaja University, University of Latvia, Art Academy of Latvia, Business, Art and Technology Higher Educational Establishments, which represented 4 different educational programmes: 97 Bachelor, Masters and PhD level students of pedagogy education programme, 51 of psychology education programme, 56 of economics education programme, 34 of art education programme.

As a result of the research, quantitative and qualitative data were obtained. Survey was used for the primary quantitative data acquisition in which 224 respondents took part, whereas the qualitative data were obtained in two focus discussions where a total of 14 respondents took part.

Cronbach's alpha coefficient to check the reliability of the test on a scale Big-*C* (α=.734) *Little-C* (α=.831), *Mini-C* (α=.871), *Pro-C* (α=.853) confirms the internal coherence as acceptable and good.

The Kolmogorov-Smirnov Test was used to determine the empirical distribution. As the empirical distribution did not comply with the normal (p=.000), for the secondary quantitative data acquisition the non-parametrical data processing method – Kruskal-Wallis was used to determine differences between four independent selections and Spearman's Rank Correlation Coefficient to detect the correlation between creativity criteria for the programme's quantitative data processing in the SPSS environment. In its turn, for the secondary qualitative data acquisition linkage programmes were used for the qualitative data processing in the AQUAD environment.

In order to assess the 4 creativity criteria and indicators identified due to the theoretical analysis, the Likert Scale was applied in the range from 1-5, where 1- absolutely agree, 2- agree, 3- neither agree nor disagree, 4- disagree, 5- absolutely disagree.

Findings

The results of the Kruskal-Wallis Test show that the respondents' profile (the represented education programme) affects the one which of creativity kinds is considered by the students of the corresponding education programme the dominating one. Statistically significant differences ($p \leq 0.05$) have been found in three creativity criteria assessment: *Little-C, Mini-C* and *Prof-C* (see Table 1).

As the respondents involved in *Big-C* research had not identified, it was considered as an artefact and was not analysed in the subsequent research.

Table 1. Indicators of inferential statistics of creativity: statistical significance of differences

Criteria of creativity	Results of Kruskal-Wallis Test	Higher evaluated by	Lower evaluated by
Little-C	p=.039	pedagogy education programme students (Mean Rank 98.63)	economics education programme students (Mean Rank 126.99)
Mini-C	p=.031	art education programme students (Mean Rank 93.73)	psychology education programme students (Mean Rank 130.61)
Prof-C	p=.033	pedagogy education programme students (Mean Rank 99.29)	psychology education programme students (Mean Rank 131.84)

In the everyday creativity, which is manifested in problem-solving situations in daily life or at work and marked with the code "*Little-C*", assessment there are statistically significant differences (p=.039) - it dominates among the students of pedagogy education programmes in comparison with the students of economics education programmes, who believe that they have it to a lesser extent.

The students of pedagogy education programmes, who have started their pedagogy studies immediately after the comprehensive secondary education acquisition, have got direct information on the educational process, which is based on personal experience. An essential part of communication is made by communication with own teachers, communication with classmates and other agents of the social system. The choice of pedagogy education programme is more often influenced by the best teachers' encouraging attitude or the school leavers' desire to imitate outstanding teachers. Creative students are able to apply their excellent teachers' experience and good practice of one subject teaching into another subject. It means students in their problem-situations apply not a pre-taught algorithm appropriate for the particular problem-situation, but they find solutions to problems in several ways which is facilitated by the developed abilities and skills to collaborate, find the best, most original solution through cooperation, but in case of a faulty solution to look at alternative types of solutions.

The study environment, which consists of not only the modern infrastructure of higher educational establishments and available technological and informative resources, but also the social environment, which consists of other students and academic staff, promotes enrichment of own experience with others' knowledge, encourages them to adapt learning strategies, apply diversity of methodological techniques.

The teachers, who retrain or raise their professional competence on a higher level, are often with the pedagogical work experience and a bigger accumulated capital for their creativity. During the study process, interacting with creative personalities from the students' environment and from the academic staff's side, creativity manifestations are also promoted amongst the more inert students' environment.

In teachers' training programmes the subjects are promoted which develop and improve the abilities considered as necessary for the new generation's education in compliance with the labour market demand. For instance, in one of the institutions involved in the research, where the teacher training programmes are implemented, the introduction of compulsory piano playing, choir singing for all students of the programme in the primary and elementary teacher training professional study programme, also for the ones whose musical readiness was weak, testifies the good practice of the creative ability development. During the study process also after the age of 18, trainees' abilities were unleashed and even talented students were revealed who thanks to a purposeful pedagogical activity learned not only to play the piano accompaniment for songs, but also were able to compose musical compositions, create arrangements and organize them. Every year at the end of the study course the new teachers – unprofessional musicians' compositions are played in creative concerts. During the graduates' meetings teachers of different subjects remembered as the best highlights of the study time just the musical activities, which they had also applied in their professional career when developing creativity in their learners.

In its turn, the experience of economics students, as opposed to the pedagogy students, is not usually based on professional practice. They have to acquire the universal regularities of economics and there are no such limits left for improvisation. The creative potential of students of economics most often unfolds in the search for solutions to unusual situations when commencing their work career. However, it does not exclude offers of individual solutions for creativity. The studies of economics are focused on the comprehension of the free market's economics. The new generation is free from the inhibiting opinions and behavioural model of the previous system. The students, after having really been encountered in their practice with the functioning of manufacturing, transport and service and other fields in Latvia and other countries, have come to a conclusion that a system of small economics has to be a lot more flexible – with an ability to adapt in different changeable conditions. The companies, institutions, which can be described as innovative, have experienced growth thanks to the creative ideas which have been brought to life and satisfy not only the local self-consumption, but also increase the export capacity.

The future economists, who are not only the office employees on a micro, mezzo and macro level in perspective, are involved in the economic growth modelling and development planning activities, which are interwoven with the manufacturing process research and management process development. Due to the increase of competition on the global scale, the quality standards of competence set for the staff also increase, as the dynamic economic growth cannot be reached with the standardized techniques of the routine.

In the personal creation as skills, that can be developed during the study process and that have been marked with the code "*Mini-C*", assessment there are statistically significant differences - the students of art education programmes have assessed higher in comparison with the students of psychology education programmes who think they have it to a smaller extent.

Personal creation of students of art education study programmes prevails over the acquisition of classical art canons. Variety of art types and their development is not a stagnant process. Appearance and development of art types is often related to the application of innovative technological achievements, also the artists' openness to acquire new techniques, look for different means of expression, accept challenges to classical values, stand out with own originality.

Advertising design, which as an example can be mentioned in the education programmes related to art, on a mini creativity level is the result of personal gift cultivation in correlation with the "pressure" from the social environment, understanding with it the necessity for self-expression as the condition for recognition which promotes acquisition of own niche in the advertising market.

If technologies and knowledge on the advertising work principles have been acquired and they are widely circulated, then the recipient's perception has fallen asleep. A new challenge for the students of the advertising design study programmes – overcome the routine, become a field of activity attracting attention in order to promote commercialization of services, inventions and goods.

Opportunities of personal creation for the students of psychology, in comparison with the art world, are mostly related to communication with people. The strict compliance requirements of legislation and ethical standards restrict manifestations of personal creation.

Self-reflection to psychologists – knowledge on the chosen field/discipline regardless the academic field or field of professional activity as for practising specialists develops in correlation with the theory and practice, where the experimental approach and the qualitative research dimension, which has gained no less relevance, dominate, based on phenomenological traditions. Traditions, according to the definition, tend to acquire, preserve and pass on experience, which within a certain level of education restricts creative search while the basic knowledge has not been acquired.

In the high developed professional competence, which has been marked with the code "*Prof-C*" in the research, assessment there are statistically significant differences (p=.033) among the students of different programmes – the students of pedagogy education programmes tend to assess it higher in comparison with the students of the psychology education programmes.

The students of the pedagogy study programmes see in themselves creativity as their personal growth factor. Teachers are aware of that and they try to develop themselves searching for self-education opportunities and accumulating methodological techniques of their positive experience adapted in the social experience, acquired knowledge, obtained experience. They think it is important to be in touch with the leading specialists of their professional field, as well as the dissemination opportunities of their creative ideas and feedback - evaluation and recognition of their ideas are considered as important.

Studies of psychology on a theoretical level are usually started in higher educational establishments. The professional competence is created not only form theoretical findings, but also from the cases of empirical experience, accumulation of purposeful practical work experience, which is a long-lasting process during the whole professional career.

The professional identity acquisition process for the student studying psychology is complicated. It is hard to achieve excellence during the studies without wide empirical work experience. Productive manifestation of creativity develops through longer education and practice which has to be developed throughout the whole life.

The results of the Spearman's Rank Correlation Coefficient calculations show that there is a close correlation between all creativity criteria analysed in the research - *Little-C, Prof-C* and *Mini-C* (see Table 2).

Table 2. Inferential statistics indicators: correlation analysis

	Little-C	*Prof-C*
Little-C		
Prof-C	r=.725** p=.000	
Mini-C	r=.706** p=.000	r=.757** p=.000

The holistic approach focuses on the fact that creativity is not viewed in a segmented way in the study directions and there is no particular distinction between types of creativity, which have variable, fluid and flexible boundaries: both in one individual and study profile groups according to the affiliation of the study programme it has been discovered that one type of creativity is dominating. However, it does not exclude other types of creativity. The types of creativity overlap with each other and, developing the dominant form of creativity, others develop simultaneously. Unleashing the "dormant" type of creativity, the dominant form of creativity can marginalize , but the secondary one can come to the forefront, as in every changeable situation affected by both the internal and external factors, the agents which adapt flexibly and mobilize in themselves the most appropriate forces of creativity in order to solve an unusual situation are the most gratifying for problem-solving.

The sign of the new age – currently the youth, who have chosen studies, have grown up together with the technologies which their teachers started to acquire alongside. Application of new technologies is an everyday thing for the youth. In the study process the collaboration aspect between students and lecturers as partners has become topical. In this case it is important to create cooperation so that students could apply their abilities to manage technologies for a creative study content acquisition and the form would not suppress the content.

Professor of mathematics at university, excellence in methodology teaching maths, after whose textbooks several generations have been educated and grown up, were at the forefront of developers who had created books and methodological tools for several teachers' generations, thanks to creativity and close connection with science and social life development. When working with students, teaching them mathematics and methodology of mathematics, they did not have any difficulties to convince them about the rational world order and it was even possible to see mathematical interconnections in music and with its help. Later on, the maths professor's daughter, composer and now the professor of composition admitted that during her studies she was able to see similarities in music harmony with mathematics. The above-mentioned professor's manifestations of creativity, who as a personality has evolved from a day-to-day practical decision-making to the highest level of the academic performance, prove that it is possible not to lose the connection with current events while changing and self-educating alongside the transformation of science, technologies and social and global changes if the personality is creative and focused on the particular goal.

The results of quantitative data processing (correlations) are confirmed by the results of qualitative data analysis (linkages). 11 linkages have been identified for the qualitative data processing of the programme in the AQUAD environment between *Little-C, Prof-C* and *Mini-C*, for instance, in the student reflection on the acquired culture and social anthropology course at Liepaja University during the academic year 2019/2020:

"When we first were introduced with the description of the full-time study course developed by the lecturer, the first reaction was shocking due to the volume and complicated content. Only during the study process, we understood and appreciated the importance of the study course. The course acquisition was the hardest in our experience, but it was also the greatest satisfaction about the achieved. We all agreed in our discussions that such a creative approach from the lecturer's side was a revelation for us. We, students, are with various interests, different life and learning experience, which was not considered as a disadvantage by the lecturer, but we also understood that we can enrich each other emotionally and professionally with our own experience and knowledge. In our third year we realized for the first time how smart and creative we were, that the knowledge and experience, which most probably was not related to our study profile, could be found in everyday creativity and it is not outside our sphere of interest."

In the mentioned student's own work and cooperation self-assessment it is revealed that the academic environment includes a large creative potential which depends on both the academic staff's professionalism and diversity of the offered methodology with integration of tasks looking for creative solutions in the self-educating process, seminars, conferences and studies based on research, where students are education and science acquisition partners, new idea generators and seekers of the ways to implement their ideas.

Results, Conclusions and Recommendations

Respondents' profile (education programme) affects students' creativity. Everyday creativity and professional competence dominate in the students of pedagogy education programmes, but personal creation in the students of art education programmes.

There is a positive correlation between everyday creativity, personal creation and professional competence. A creative personality will be able to implement their potential not only in the acquired work field due to the implementation of the chosen education programme, but will also be able to extrapolate the acquired knowledge, skills and abilities in different contexts.

Based on understanding of creative processes as complex and dynamic socially cultural phenomena as the core concept that has to be supported in order to change the education context in a creative way, and the cognition that creation of a creative learning context is not to teach different thinking techniques or art expressions, but rather reflection of the isolated activity in general perspective, understanding of education and teachers, students and parents' role in the new situation in a creative way (Elisondo et.al., 2013), the effect of synergy can be achieved with creative collaboration when solving topical issues in education.

Even though creativity cannot be taught directly, it manifests itself on a certain initiative – impulse, activating the potential resources based on knowledge, skills, accumulated experience, and situations can be created during the study process, so that creativity could be present in the education context (Elisondo et.al., 2013) and it is necessary to integrate creative teaching, teaching for creativity and creative learning in all education programmes (Lin, 2011), improving strategies for the feedback provision which help students to be more confident about their creativity and promote the transition from the personal creation interpretations to the real world innovations.

In order to support students' creativity for a successful transition from personal creativity, which is related to the skill that can be developed (*Mini-C*), to everyday creativity (*Little-C*) and high professional competence (*Pro-C*) in the education environment, comply with the scientists' suggestions:

- set for students a challenging, but real goal, focusing on the tasks which are interesting and personally important for students;
- support creative expression, encouraging students to create new ideas and helping them to choose the most promising and suitable ideas to the given task to be completed, also practice in their implementation;
- decrease the significance of assessment, focusing from result to process;
- help students be aware that the main reason for involvement in a task is their own development;
- help students learn from their mistakes and acknowledge that making mistakes is an efficient part of learning;
- help students rethink and be aware of what the obtained evaluation means which is expressed in grades (what they did well and how they could improve their performance in future) (Beghetto, 2005; Kaufman & Beghetto, 2014);
- offer a motivating and developing education environment which promotes application of technologies in blended learning (Hocenski, Sedlan-Konig, & Turjak, 2019) and collaboration (Mehdiyev, 2019),

also creates a general sense of positivity (Middleton & Curwood, 2020) and other preconditions for a successful creativity development in the education programme implementation process.

Plagiarism Rate = 0 %

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Provision of Interprofessional Collaboration Quality within the Framework of Social Services Working with Families of Children with Special Needs

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Abstract
The research describes the team building process in the context of interprofessional cooperation, focusing on ensuring the effectiveness of the team work. In accordance with the research objective, the study explains the concept of quality, highlighting the role of motivation in ensuring the quality of social services considering the most important motivators. Part of the research is based on the experience of the Association "Dižvanagi" dealing with the development of social services for families of children with special needs. Based on this, the tools for assessing the quality of social services are further explored, summarizing the most important criteria for quality of communication. At the end of the study, the authors offer a tool that allows assessing the cross-sectoral collaboration and identify the problem areas in order to make the necessary improvements.
Keywords: Social services, collaboration, teamwork, assessment, efficiency.

Introduction

Problems in the social field are characterized by the fact that they are often the sum of several problems and cannot be solved within one field or with the support of one specialist. Social workers often work with the clients whose problems are multidimensional, therefore, in order to solve them, it is necessary to organize an interprofessional team involving several specialists even within one institution. The areas of expertise involved in the teamwork are determined by the specific situation and the result that must be achieved.

Although, according to the authors, interprofessional collaboration is the most efficient tool for social work in a family of a child with disability, the professional experience suggests that in practice there are often situations when interprofessional collaboration and therefore the goal of this collaboration - rehabilitation process of a family and child - not always is achieved. Therefore, the issue of identifying the types and criteria of social service quality assessment becomes relevant, which would allow to ensure purposeful, effective interprofessional collaboration in the rehabilitation of children with special needs.

The aim of the research: to establish an efficient tool for interprofessional teamwork assessment in order to enhance the quality of interprofessional collaboration in work with families of children with special needs, grounding the study in theoretical and practical research studies.

The results of the research: the criteria for determining the quality of social services are summarized and a tool developed for assessing interprofessional collaboration, which can be used as a basis for improving the quality of social services in working with families raising children with special needs.

The research results can also be used for further studies focusing on the improvement of social services in order to ensure the fullest possible quality of life for children with special needs.

Method
Theoretical: analysis of literature sources and regulatory enactments.
Empirical: survey of the target audience, expert interviews.

Research base: 35 families with children with special needs, experts.

According to the data listed in Action Plan for the Implementation of Deinstitutionalisation 2015-2020, January, 1, 2015, in Latvia a disabled child status was granted for 7924 children with functional disorders. Of these, 1030 (13%) live in Kurzeme and 317 (4%) in Liepaja (Action Plan for the ..., 2015).
If there is a child with disability in the family, then life gets adjusted to the child's care and recovery.
The intensity of care depends on the severeness of disability, but referring to the UN Convention on the Rights of Persons with Disabilities 2014-2020, it can be suggested that disability reduces the access of the resources needed (development of social contacts, attendance on cultural events and ensuring living conditions that suit the needs of the family), which worsens the quality of life (UN Convention, 2013).
In order to help the child and get answers to questions of concern, parents sometimes have to visit different specialists even within one institution, and often opinions differ about the child's condition, future perspectives and the necessary treatment/ rehabilitation plan. The diversity of professional opinions is highly desirable, however, with a condition that they focus on a careful analysis and summary of the situation, identification of the best possible solutions and their inclusion in the rehabilitation process.
Previous research studies of the authors have led to the conclusion that in collaboration of various professionals often there is a lack of constructive exchange of views and a final summarizing conclusion. Within the rehabilitation process, the work with the child and the child's family is mainly fragmentary. Thus, it can be suggested that a holistic approach, working with a family and a child as a unique, unified whole and finding the most suitable rehabilitation techniques for the child, based on the specifics of his/her health condition and individual needs, is not fully implemented in practice. In order to understand, what exactly is happening to the child and what should be done to improve the situation, families continue to consult with countless specialists and other families with similar experience, and, based on the information obtained, independently draw conclusions and make decisions about their child's further rehabilitation. However, these decisions are not always adequate. Without linking and assessing specific health disorders or developmental indicators in the context or in a holistic way, the rehabilitation process is fragmented and incomplete, and not directed towards a unified goal - gradual improvement of the particular child's overall health condition. Besides, it consumes a lot of time, financial and emotional resources of the family, which significantly hinder the recovery process.
Therefore, rehabilitation based on a holistic approach involves assessing and stimulating the child's intellectual development in order to prevent possible intellectual development disorders in a timely manner and to reduce their impact on the child's quality of life, health and safety. Therefore, the authors are convinced that a rehabilitation service, based on an interprofessional team approach, should serve as a support system for the whole family, ensuring and coordinating the most comprehensive assistance possible in a concentrated and deepened form, so that the service would be based on a holistic and result-oriented approach, not limited to providing a standardized process.
The rehabilitation based in the interprofessional team approach means the interaction of specialists from different fields, working in a united team and concentrating their knowledge and experience on a particular child and his/her family in the specific situation moving towards a specific goal.
Dıfferent theories present various models of team building and its systematization (Briede, 2005), however, in order to reflect the desired scenario of interprofessional team development, in this study the authors look at the team development from interprofessional team building perspective.

Table 1. Interprofessional team formation and development levels (Briede, 2005)

Level 0 “Zero interprofessional team development level”
There is no team yet - everyone works individually
Level 1 "Multidisciplinary level of interprofessional team development"
The most common type of a team; specialists are informed about each other, meet regularly, contribute to team work, represent their discipline, each expresses thoughts on solutions to the problems, discusses success, plans actions, etc. Criticism: the result of the team work is the sum of everyone’s individual work results. A unified approach would be more

successful.

Level 2: "Interdisciplinary level of interprofessional team development"

Centred and integral; each specialist gives a maximum contribution to the implementation of common goals; the team consists of professionals, guest practitioners, etc., the client can be involved; jointly the decisions are made on the next steps to be taken – who is responsible about what; the time is agreed for the next meeting to assess the progress and decide on the way forward; the approach guarantees a more successful outcome, lower costs, higher staff return

Level 3 "Transdisciplinary level of interprofessional team development"

The most competent, less commonly used teamwork approach; the boundaries of professional responsibilities converge, the division of responsibilities is based on practical needs; there is a need for experienced specialists who can closely collaborate; the approach is also implemented in team meetings with participation of the client and his/her family. The problem is described and the situation is assessed, a team action plan is drawn up together, indicating individual tasks.

At the interdisciplinary level of interprofessional team development, the team work can be described as effective, while at the transdisciplinary level the interaction of specialists take place (Briede, 2005).
As it is emphasized in the Framework of Professional Social Work Development for 2014-2020, prepared by the Ministry of Welfare of Latvia, the Professional Standard of social worker sets high requirements. In order to be able to assess the client's needs, social skills, resources and identify possible solutions and support mechanisms relevant to the client, the social worker must be able to enliven the principles of a holistic approach in his/her work with a client (Framework of Professional Social ..., 2014)
A holistic approach to children's health care and rehabilitation is being discussed more and more often. The concept "holistic" is characterized by the belief that the individual parts that make up a whole are closely interlinked and can only be explained with the reference to the whole. For example, holistic medicine means that a person is treated as a whole - taking into account the mental, spiritual and social factors during the treatment process, and not just symptoms of a specific disease.
Holistic medicine looks at the patient as a whole when exploring the patient's situation (diagnosing problems), not just at his/her physical symptoms. A holistic approach is also mentioned as a supportive trend in patient care in the European Parliament's motion for a resolution, which is included in the report "E-Health Action Plan 2012-2020: Innovative Healthcare for the 21st Century (European Parliament's motion ..., 2013).
The document "Organization of Professional Activity in State Social Care Centers", developed by the Ministry of Welfare of the Republic of Latvia, also emphasizes a holistic approach in the context of multi-professional team activity. In the document, the multi-professional team is defined as: "a holistic process where the client is viewed and assessed in the context of his/her environment, including family situation, social and economic situation, education and other indicators vital to the client" (Organization of Professional Activity....,2015).
It is important to understand that a holistic approach is not guaranteed by involvement of different specialists in working with the client, but by effective collaboration and interaction of different specialists in solving the client's problems. Here it is important to emphasize the aspect of time. When developing a social support system for a child and a family, it is crucial to plan it in the long term, avoiding a periodic, campaign-like approach.
Also the Framework of Professional Social Work Development for 2014-2020 recognize the importance of interprofessional and inter-institutional cooperation for ensuring a quality social work. Another important factor is the awareness of the common goal when improving the client's situation, and each specialist must be aware of the individual responsibility for achieving the team's common goal (Framework of Professional Social..., 2014).
Although there are certain differences between multi-professional and inter-professional team work, this definition allows tooutline more clearly the use of the teamwork as a tool in the context of this research. Specialists inform each other, each of them expresses opinion about the client's problem and about possible help and support options. Each professional of the team tests and assesses the client using professional assessment tools. Then the team meets, the problem is presented and the situation is assessed
This definition formulates the desired course of interprofessional team's work, including the overarching goal of the teamwork and its most important dimensions in the provision of social services.
In a democratic state, the quality requirements for services of public interest are regulated by legislation. It refers also to social services, where quality requirements are specified in the Law on Social Services and Social Assistance of the Republic of Latvia (2002) and Cabinet of Minister's Regulation No. 338, "Requirements for providers of social services" (2017).

In order to ensure the quality of a social service, it is necessary to define the preconditions or criteria that need to be met. The work of the interprofessional team and the social services provided by other organizations, and the overall work process of the organization/institution should be regularly assessed in accordance with these criteria.

The basic quality management principles, which should be used in the assessment process, are:

1. focus on the client;
2. staff development and involvement in all institution's activities;
3. processes and facts;
4. continuous improvements and innovations;
5. clarity of the purpose;
6. liability to the public;
7. orientation towards result.

Thus, we can conclude that the assessment of social services includes three main areas: professional social work (practice, regulations, theory, development perspectives), client needs, and inter-institutional and interprofessional cooperation (good practice management, supervision and coordination, resource management). Assessment of the operation of a social institution is important both from the point of view of protection of clients' interests and for improvement of the quality of services. Alongside the utilization of financial resources and other quantifiable principles of service adequacy, it is equally important to assess the qualitative factors of the service: service content and compliance with 'good practice' principles, as well as the need to develop new services and modernize, improve and/or eliminate the inefficient ones.

Findings

In the practical part of the study, the authors employ the results obtained from surveying the target audience (35 families of children with disabilities), expert interviews and observations in the professional rehabilitation institution "Dižvanagi" - Baltic Rehabiritation center for families of children with special needs, which is one of the internship places for students studying social welfare and health care at Liepaja University.

The study was conducted from August to December 2019, obtaining results from 35 families that are in sight of the association "Dižvanagi", and which can be considered as a potential target group for the organization's planned social service "Interprofessional Council for Work with Families of Children with Special Needs".

In order to get a comprehensive idea of the needs and experience of the target group in terms of the research problem, the questionnaire contains both closed and open-ended questions.

The characteristics of the target group:

- The surveys were completed by the child's father – 17%, the child's mother - 75%, the guardian 8%.
- The average age of children is 6 years.
- İn 92% of the surveyed families, the child has a disabled child status
- An average income per family member per month - 300 EUR.

Assessing the quality of social services, the authors have included the data obtained through the surveys, which demonstrate the most frequently used social and medical rehabilitation services.

Table 2. Specialist consultations needed for the child on a regular basis

Specialists	Summary of responses %
Homeopath	8
Masseur	25
Manual therapist	8
Nutrition specialist	17
Music therapist	17
Osteopath	17
Occupational therapist	25
Rehabilitologist	50
Neurologist	50
Speech therapist	58
Physiotherapist	84

As it can be seen in Table 1, in order to promote children's recovery and rehabilitation, families use a wide range of specialist services, consisting of consultations with various specialists, as well as various therapies and classes. Most children regularly need the support of a physiotherapist as well as a speech therapist, neurologist and rehabilitologist. Many children need occupational therapy, music therapy, massage, as well as consultations of individual specialists - osteopath, chiropractor, nutritionist.

Table 3. Additional rehabilitation and social rehabilitation services needed for the child need in addition

Specialists	Summary of responses %
Water procedures	8
Masseur	8
Montessori specialist	17
Reittherapy	25
Music therapist	8
Osteopath	33
Occupational therapist	8
Canine therapy	17
Neurorehabilitation	17
Speech therapist	25
Physiotherapist	8
Therapeutic exercises	20
Audio stimulation	8
Massage	12
Home neurorehabilitation program	42

In the survey there was also an option ‘and others’, and respondents listed the need for a support group service, psychologist, doctor-pediatrician, social worker’s support in a form of consultations. However, there are some families who indicated that they have not received any support so far. Also, a critical view was expressed saying that it is already a support if a doctor listens to the family's suggestions for the child's treatment and gives the necessary referrals.

When asked about desired support in their child's rehabilitation process, the families admit that they expect responsiveness, return and interest from the specialists, as well as the availability and unified approach that would help to avoid visiting many different specialists in different institutions. Families also indicate that they expect a greater understanding from the specialists about the child's situation in general. Families suggest that professionals should work in a team.

Families also emphasize the possibility to receive the help of several specialists in one place in institutions providing social services as especially positive. In their answers, the families also appreciate the general tendencies - the fact that living conditions and the availability of the environment are gradually improving, non-governmental organizations are becoming more active, the range of therapies is widening, it is possible to use different alternative therapies within one institution. As another positive trend, the respondents mention communication - parents increasingly share their experience and knowledge, there are opportunities to make contacts, gain useful knowledge, adding that it all depends on the parents themselves - it is also possible to receive the services more often if the family gains better knowledge about the procedure for receiving services.

On the other hand, families mentioned the lack of individual approach, long queues for services, complicated and time-consuming formal procedures, communication between professionals and lack of common understanding about the child's rehabilitation possibilities and needs as factors that can be assessed as shortcomings in the provision of rehabilitation services.

The results of this study partly coincide with the reference to the research included in the Guidelines developed by the Ministry of Welfare of the Republic of Latvia, which identifies some of the problems observed in interprofessional and inter-institutional cooperation. They are:

- lack of information exchange;
- uncertainty about the division of responsibilities between cooperation partners;
- the competence limits of each institution are not defined clearly;
- the involved institutions do not have the understanding, knowledge and skills needed for solving the client's social problem.

Results, Conclusions and Recommendations

As a result of the research, the authors come to the conclusion that when working with families of a child with special needs, one of the important aspects is the establishment of an interprofessional council.

The interprofessional council is a social service with a socio- medical advisory assessment.

Council's activity should be concentrated on in-depth evaluation of the child and family's situation in the context of socio- medical problem identifying an optimal solution.

The interprofessional Council is like an instrument, which allow, firstly, assessing each case in its essence, respecting the child's individuality, keeping in mind specifics of a particular child's state of health, other nuances, the social environment.

The functions of the Council do not limit to a comprehensive assessment of the situation and a final conclusion.

Using knowledge, experience and professional contacts, the Council is also aware of the most appropriate forms of rehabilitation for the child. The Council will act as a bridge, coordinating family's collaboration with specialists and service providers, whose involvement in the rehabilitation process, in accordance with the council's recommendations for the child and/or family, would be necessary.

The interprofessional Council is a support mechanism for families of children with disabilities/ special needs in order to enhance the cooperation of specialists with the family, thus improving the quality of the child's rehabilitation process. This would significantly ease the role of the family and prevent from choosing rehabilitation forms that are unsuitable or useless for the child's state of health.

Despite the problems identified, the authors want to emphasize the interprofessional collaboration as the most effective tool in social work with a family of a child with disability. It is important to understand the weaknesses of the social work instrument, so that when developing a social service based on interprofessional collaboration, it would be possible to plan also a service quality assessment tool, including in it the possible risk factors. At the same time, the identification of risks will help to identify them in a timely manner during the process of interprofessional collaboration. One of the solutions for objective evaluation of interprofessional cooperation and service quality assurance, in the view of the authors of this article, is the Reflex scale.

In order to receive previously unprepared answers and avoid as much as possible the "correct answers", the compilation of which would have only a formal meaning, the authors conducted the expert interviews, enquiring about the quality of social services in general, teamwork aspects and need for collaboration between the specialists - how important it is and how can be ensured that professionals not only collaborate but also interact.

The interviews were conducted in December 2019. Specialists from ten different fields were interviewed.

According to the experts, the most topical problems in work with families of children with disabilities is related to the children's assessment process, which is under a special attention in the process of deinstitutionalization. Specialists emphasize that before meeting the child in person, the specialists involved in the assessment usually do not have any information about the child's state of health. Thus, given the time constraints, within the evaluation process it is not possible to explore fully all the issues that are essential for obtaining a complete picture.

Another problem is that the assessment takes place in the circumstances that are unusual for the child, which increase the levels of stress and may lead to inappropriate child's behaviour, and also it influences the child's parents, legal representatives or accompanying person's ability to provide full and constructive answers to the specialists' questions. This leads to a situation when, for example, at the end of the evaluation a reittherapy is recommended to improve the child's health and promote development, even though it causes allergic reactions to the child. Both - specialists and parents are confused in such situations.

According to the parents' survey results, as well as problems raised in the conversations with the parents, it can be concluded that the greatest risk of inter-institutional, inter-professional cooperation is directly related to communication. This applies to the form of communication, the quality of the communication content, as well as the organization of the communication process.

Referring to the shortcomings in the receipt of services related to the rehabilitation of the child, the families have mentioned the lack of responsiveness, involvement and interest, as well as the lack of initiative regarding the provision of recommendations on the additional services needed for the child. In this context, the need for a holistic approach should also be emphasized, although the use of a holistic approach is widely discussed and, at least at the level of discussions or service documentation, it is largely defined everywhere.

In the course of the research, the authors have compiled the quality criteria, which they have considered as purposefully applicable and relevant to the needs of the social rehabilitation institution Dižvanagi for assessing the quality of the planned social service.
The core of the planned social service is the interaction of the interprofessional team.
On the one hand, this is a foreseeable precondition for the efficiency of this service.
On the other hand, it is also where the risk of service quality lies, taking into account the problematic aspects of interpersonal communication, as well as the problems of interprofessional collaboration identified in the Framework issued by the Ministry of Welfare.
According to the definition available in the database of Academic Terms, reflection is radiation from a surface (Database of Academic Terms,n.d.).
In turn, from the psychological point of view it is a form of human self-awareness and an essential feature of thinking, which ensures reflection on one's own experiences and thoughts; elementary reflection - analysis and evaluation of thoughts and actions (Vīdnere,).
Keeping in mind that the survey results have a subjective vision, however, summarizing the views of the experts and families of a child with disabilities, the authors offer a reflex measurement scale as one of the tools for measuring the quality of social services, which would allow to determine the differences in the assessments as accurately as possible: how the collaboration is evaluated by the specialists, how the given service is evaluated by the service provider - the institution, the head of the institution, and what is the evaluation of the clients. The intention of the reflex scale is to reflect visibly the range of the answers provided, thus, giving a clear and visually unambiguous picture of the trends. The wider is the range of answers, the more ambiguous is the assessment, thus providing a ready-made justification and clearly marking specific points for discussion about the quality of the provided services. The essence of the reflex scale is to determine the quality of inter-institutional, inter-professional collaboration, looking at the results of quality assessment in interaction or contrast, mutual reflection (from point of view of specialists, service recipients and other target audiences).
The tool can be used not only to evaluate interprofessional collaboration, but also to assess the quality of social services in general, reflecting the comparison of clients' evaluation and the self-evaluation of the service providers, using common criteria according to the needs of the institution.
Thus, we can conclude saying that interprofessional collaboration is the most effective instrument to ensure the quality of social services for families of children with special needs. There are many quality criteria, but given the different situations of families and the complex illnesses of children, it is crucial that professionals are able to ensure the quality of collaboration, interpersonal relations and information flow to meet the specific needs of each family.
It is important to understand that a holistic approach is not guaranteed by the involvement of different specialists in work with the client, but by the effective collaboration and interaction of different specialists in solving the client's problems.
When creating a social support system for a child and a family, it is crucial to plan it in the long term, avoiding a periodic, campaign-like approach.
The concept of "quality" is inherently flexible and undergoes a continuous process of perfection in line with societal developments.
Consequently, one of the keys to quality assurance in the field of social services is flexibility, the ability to ensure the topicality of the service in accordance with the actual demand. In order to provide a quality service, it is important for the interprofessional team to use purposefully the experience gained in the past, at the same time being able to assess substantially the current situation and specific circumstances, respecting the requirements of regulatory enactments and with readiness to respond to them.
In order to organize high-quality inter-institutional cooperation, it is useful to develop a quality management system for collaboration, carefully defining the areas of responsibility and the information flow.
Based on the above mentioned, the reflex scale can be considered as one of the solutions for ensuring and assessing the quality of interprofessional collaboration for the provision of qualitative social rehabilitation services for families of a child with a disability.

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Distance Education in COVID-19 Process: Investigating the Opinions in Terms of Different Variables

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Abstract
Distance education which has being used for a long time get more and more important today. Distance education is a facilitator for sustaining education under different circumstances. For example, distance education can be preferred because of economic reasons, personal learning styles or self-development. However, COVID-19 process has occurred that distance education is not a facilitator for education but also an inevitable system for the world of the future. Since the pandemic process has affected all the systems, it has been seen that many countries have preferred to use distance education to sustain their education systems. Based on this situation, this study aimed to investigate the opinions of the university students who attended distance education at Sakarya University during the COVID-19 pandemic process in terms of the variables of gender, attending distance education previously, owning personal computer, age, grade, place of residence and income. In this context, the study was designed with descriptive scanning model which is one of the quantitative research models. The study group was selected by the criterion sampling method. So, attending distance education during COVID-19 process was stated as the criteria. As data collection tool, Opinion for Distance Education Scale developed by Yıldırım and his colleagues (2014) was used. The data analysis was made with SPSS packet program and Mann Whitney U, Kruskal Wallis tests since the data collected did not show normal distributions. In this context, it was found that the opinions of the university students on overall distance education and personal suitability sub-dimension differed significantly according to gender, attending distance education previously, owning personal computer, age, grade and income; on effectiveness sub-dimension differed significantly according to gender, age, grade and income; on instructiveness and familiarity sub-dimensions differed significantly according to age and grade. Within the lights of the findings, the results were discussed and some recommendations were given.
Keywords: COVID-19, Distance Education, Education System, Pandemic Process

INTRODUCTION

As a cliché introduction, it would be fair to say that changes and developments in human history have constantly influenced people's lives. But the developments in information and communication technologies in the century and especially in recent years make people's lives significantly easier in all areas.The advancements in information and communication technologies have also changed the field of education, and given the applications and opportunities offered by these advancements, online education emerged (Hamutoğlu, Sezen-Gultekin & Savaşçı, 2019; Hamutoğlu, Sezen-Gultekin, Savaşçı & Bağcı, 2019).

Online education is teaching and planned learning in which teaching normally occurs in a different place from learning, requiring communication through technologies as well as institiutional organization (Moore & Kearsley, 2013). It is a type of education which is delivered remotely via information and communication technologies, and it allows individuals to receive education without space and time constraints (Hamutoğlu, Sezen-Gultekin, Savaşçı & Bağcı, 2019).

In the late 1990s online education was a valued component of many education systems and proved its worth in areas where traditional schools, colleges and universities have diffiulties meeting demand (Keegan,1996). Online education, which has been used for a long time, is becoming even more important today. Online education is a facilitator for maintaining education under different conditions. For example, online education may be preferred due to economic reasons, personal learning styles, or personal development. Or, for example, an individual can continue his education at a higher education institution located outside the city if he wishes, or an individual who wants to do a master's degree can carry out both his work and his education life at the" same time"(Hamutoğlu, Sezen-Gultekin & Savaşçı, 2019). In this context, while the use of online education system has so far been evaluated depending on people's preferences, the new type of COVID-19 process has shown that online education is no longer a facilitator for people, but also an inevitable system for the world of the future.

The new type of COVID-19 pandemic, first seen in Wuhan, China in December 2019, soon spread to almost the entire world, catching all countries unprepared, affecting all systems of humanity. After coronavirus was first seen in Turkey on March 10, 2020, which is one of the parties affected by the situation, sudden measures were taken, and work was carried out on online education at all levels of Education. Then, as of March 16, 2020, it was decided that universities should continue education through online education. After this decision, some legislative changes were made by the Turkish Higher Education Council (YÖK) related to online education; Digital course materials of universities were opened to open access with an interface called YÖK courses (Courses of Higher Education Institutions); practical trainings, internships, vocational training in the workplace were also transmitted to universities by taking decisions according to the course of the epidemic (YÖK, 2020).

In addition, universities have started online education through their systems so that they do not meet with students in order to prevent the transmission of the virus. Given that Keegan (1996) stated how important online education was to address the difficulties experienced in meeting the demands of meeting in education many years ago, this was a logical action. But in this process, the fact that the online education infrastructure of each university is not the same, that academics have not previously taught through online education, and that higher education students have not previously received online education has created different problems in Turkish Higher Education. For this reason, the aim of this study was to determine the views of university students who have been studying in the COVID-19 process at Sakarya University, which has been providing services with a strong online education infrastructure since the early 2000s.

Aim of the Study and Problem Sentences

Accordingly, this study aimed to examine the views of university students who received online education at Sakarya University during the new type of COVID-19 pandemic in terms of gender, previously continuing distance education, owning their own computer, age, class, place of residence and income variables experienced in the distance education process. The research problems covered in this context are as follows.

- What are the participants' views on distance education?
- Is there a significant difference in the views of participants regarding the distance education according to
  (a) gender,
  (b) age,
  (c) class,
  (d) previous distance learning status,
  (e) having a personal computer,
  (f) place of residence in the distance learning process,
  (g) family income level?

METHODOLOGY

Research method

In the research, one of the quantitative research methods, general survey model was used, and singular survey model was performed. Survey model aims to describe a past or present situation as it is; The individual or object subject to the research tries to define it in its own conditions and as it is and does not try to change or affect the variables in any way (Karasar, 2013). In this way, instantaneous situation determinations regarding distance education were made and opinions about distance education were determined with basic statistics.

Sample of the research

The sample of the study is formed by the students who receive education through distance education at Sakarya University during the new type of COVID-19 pandemic process, and the sample selection was made with the appropriate sample. In this context, the sample of the study consists of 338 university students selected through the appropriate sample. The demographic information regarding the relevant sample is presented in Table 1.

Table 1. Demographic features of the sample

Category		f	%
	Female	259	76,6
Gender	Male	79	23,4
	Total	338	100,0
Age	Emerging adulthood (19-26)	273	80,8
	Post-emerging adulthood (27+)	65	19,2
	Total	338	100,0
Class Level	1. Class	2	,6
	2. Class	184	54,4
	3. Class	6	1,8
	4. Class	91	26,9
	Master	55	16,3
	Total	338	100,0
Have you got a distance education earlier?	Yes	104	30,8
	No	234	69,2
	Total	338	100,0
Do you have a private computer?	Yes	277	82,0
	No	61	18,0
	Total	338	100,0
Place of residence in the distance learning process	City Center	180	53,3
	District	122	36,1
	Villages	36	10,7
	Total	338	100,0
Family Income	0-2499 TL	82	24,3
	2500-4999 TL	141	41,7
	5000-7499 TL	77	22,8
	7500 + TL	38	11,2
	Total	338	100,0

Data Collection Tools

The form regarding demographic variables: It was developed by the researchers. In the form, questions were asked about gender, age, class, status of having a private computer, previous distance education status, place of living in the distance education process and family income level.

Views on Distance Education Scale (VoDE): It was developed by Yıldırım, Yıldırım, Çelik and Karaman (2014). The scale consists of 18 items in total and 4 sub-dimensions (personal suitability, effectiveness, instructiveness and predisposition). The Cronbach Alpha coefficient of the scale, which originally had a Cronbach Alpha coefficient of .864, was determined as .842 in this study.

Data Analysis

The numerical data obtained from 343 data collection tools were transferred to IBM SPSS 21.0 package program and analyzed in a way to serve the purposes of the research. 5 pieces of data were left out of evaluation because they were incorrect. The normal distribution of the obtained data was tested with the help of SPSS program. Test results are given below.

Table 2. Normal Distribution Test Result

	N	X	ss	Skewness	Kurtosis	Kolmogorov-Smirnov
Total VoDE	338	2,53	,68	,532	,393	,038*
Personal Fitness	338	2,33	,97	,675	-,265	,000**
Effectiveness	338	2,08	1,00	,849	,126	,000**
Instructiveness	338	3,88	1,24	-,413	-1,086	,000**
Predisposition	338	2,24	1,01	,807	-,133	,000**

*p<.05, **p<.01

According to the analysis result, the number of participants is over 30 and the kurtosis skewness values are almost in the range of +1 and -1 values. However, since Kolmogorov-Smirnov p <0.05, it was assumed that the data did not show normal distribution (p =, 000). In this context, the analysis of the obtained data in terms of relevant variables was analyzed through the Mann Whitney U and Kruskal Wallis-H non-parametric tests.

FINDINGS

In this section, the relevant findings from the data are presented in tables and comments under the tables.

Table 3. Analysis of the Participants' Opinions According to the Gender Variable - Mann-Whitney U Test Results

	Gender	N	Mean Rank	Sum of Rank	U	p
Total VoDE	Female	259	125,06	20760,00	7812,500	,001**
	Male	79	142,64	13693,00		
	Total	338				
Personal Fitness	Female	259	158,93	41163,50	7493,500	,000**
	Male	79	204,15	16127,50		
	Total	338				
Effectiveness	Female	259	158,32	41004,00	7334,000	,000**
	Male	79	206,16	16287,00		
	Total	338				
Instructiveness	Female	259	174,89	45295,50	8835,500	,062
	Male	79	151,84	11995,50		
	Total	338				
Predisposition	Female	259	169,28	43843,50	10173,500	,940
	Male	79	170,22	13447,50		
	Total	338				

*p<.05, **p<.01

When the results of the U test are examined in Table 3, the participants' total distance education (U = 7812,500; p <.001), personal fitness sub-dimension (U = 7493,500; p <.001) and effectiveness sub-dimension

(U = 7334) , 000; p <.001), it can be seen that there is a statistically significant difference according to gender, all of these differences are in favor of men. On the other hand, it was determined that the opinions of the participants on instructiveness (U = 8835,500; p> .05) and sub-dimensions of predisposition (U = 10173,500; p> .05) did not differ significantly according to gender.

Table 4. Analysis of Participants' Opinions by Age Variable - Mann-Whitney U Test Results

	Age	N	Mean Rank	Sum of Rank	U	p
Total VoDE	Emerging adulthood (19-26)	273	156,76	42796,00	5395,000	,000**
	Post-emerging adulthood (27+)	65	223,00	14495,00		
	Total	338				
Personal Fitness	Emerging adulthood (19-26)	273	153,89	42011,00	4610,000	,000**
	Post-emerging adulthood (27+)	65	235,08	15280,00		
	Total	338				
Effectiveness	Emerging adulthood (19-26)	273	154,05	42055,50	4654,500	,000**
	Post-emerging adulthood (27+)	65	234,39	15235,50		
	Total	338				
Instructiveness	Emerging adulthood (19-26)	273	177,37	48421,50	6724,500	,002**
	Post-emerging adulthood (27+)	65	136,45	8869,50		
	Total	338				
Predisposition	Emerging adulthood (19-26)	273	179,11	48896,00	6250,000	,000**
	Post-emerging adulthood (27+)	65	129,15	8395,00		
	Total	338				

*p<.05, **p<.01

According to Table 4, the participants were compared to total distance education (U = 5395,000; p <.001), personal fitness sub-dimension (U = 4610,000; p <.001), effectiveness sub-dimension (U = 4654,500; p <.001), instructiveness sub-dimension (U = 6724,500; p> .05) and predisposition sub-dimension (U = 6250,000; p> .05) were found to differ statistically significantly according to age. When looking at the source of the related differences, it is seen that the opinions of university students aged 27 and over about total distance education, personal fitness and effectiveness are higher; It was determined that the opinions of university students between the ages of 19-26 about instructiveness and predisposition were higher.

Table 5. Examination of Participants' Opinions According to the Variable of Previous Distance Education - Mann-Whitney U Test Results

	Situation	N	Mean Rank	Sum of Rank	U	p
Total VoDE	Yes	104	185,40	19282,00	10514,000	,046*
	No	234	162,43	38009,00		
	Total	338				
Personal Fitness	Yes	104	189,27	19684,00	10112,000	,013*
	No	234	160,71	37607,00		
	Total	338				
Effectiveness	Yes	104	184,97	19236,50	10559,500	,051
	No	234	162,63	38054,50		
	Total	338				
Tutorial	Yes	104	158,15	16447,50	10987,500	,148
	No	234	174,54	40843,50		
	Total	338				
Predisposition	Yes	104	177,64	18474,50	11321,500	,304
	No	234	165,88	38816,50		
	Total	338				

*p<.05, **p<.01

According to Table 5, participants' views on total distance education (U = 10514,000; p <.05) and personal suitability sub-dimension (U = 10112,000; p <.05) were statistically significant compared to the variable of receiving distance education before. It is seen that these differences are in favor of those who previously received distance education. On the other hand, the opinions of the participants on effectiveness (U = 10559,500; p> .05), instructional (U = 10987,500; p> .05) and susceptibility sub-dimensions (U = 11321,500; p> .05) It has been determined that there is no significant difference according to gender.

Table 6. Investigation of Participant Views According to the Variable of Having a Personal Computer - Mann-Whitney U Test Results

	Situation	N	Mean Rank	Sum of Rank	U	p
Total VoDE	Yes	277	176,06	48768,50	6631,500	,008**
	No	61	139,71	8522,50		
	Total	338				
Personal Fitness	Yes	277	177,76	49240,00	6160,000	,001**
	No	61	131,98	8051,00		
	Total	338				
Effectiveness	Yes	277	174,11	48229,00	7171,000	,063
	No	61	148,56	9062,00		
	Total	338				
Tutorial	Yes	277	168,26	46609,00	8106,000	,615
	No	61	175,11	10682,00		
	Total	338				
Predisposition	Yes	277	169,92	47068,00	8332,000	,865
	No	61	167,59	10223,00		
	Total	338				

*p<.05, **p<.01

According to Table 6, participants' views on total distance education (U = 6631,500; p <.001) and personal fitness sub-dimension (U = 6160,000; p <.001) were statistically determined according to their own private computer variable. It is seen that there is a significant difference, these differences are in favor of those who own a computer. On the other hand, the opinions of the participants on effectiveness (U = 7171,000; p> .05), instructional (U = 8106,000; p> .05) and susceptibility sub-dimensions (U = 8332,000; p> .05) It has been determined that it does not differ significantly according to the status of owning a private computer.

Table 7. Investigation of Participant Views According to the Variable of Class– Kruskal-Wallis Test Results

	Class	N	Mean Rank	sd	χ^2	p	Difference
Total VoDE	1. class	2	208,75	4	37,194	,000**	2-3; 2-4; 2-5; 3-5; 4-5
	2. class	184	168,03				
	3. class	6	81,58				
	4. class	91	139,12				
	MA	55	232,85				
	Total	338					
Personal Fitness	1. class	2	149,00	4	52,659	,000**	2-3; 2-4; 2-5; 3-5; 4-5
	2. class	184	164,35				
	3. class	6	78,67				
	4. class	91	137,82				
	MA	55	249,80				
	Total	338					
Effectiveness	1.class	2	188,25	4	50,198	,000**	2-3; 2-4; 2-5; 3-4; 3-5; 4-5
	2.class	184	166,42				
	3.class	6	54,67				
	4.class	91	137,98				
	MA	55	243,81				
	Total	338					
Tutorial	1.class	2	218,00	4	13,466	,009**	2-5; 4-5
	2.class	184	173,77				
	3.class	6	205,83				
	4.class	91	182,33				
	MA	55	128,25				
	Total	338					
Predisposition	1.class	2	260,50	4	14,446	,006**	2-5; 4-5
	2.class	184	182,63				
	3.class	6	183,67				
	4.class	91	163,55				
	MA	55	130,55				
	Total	338					

*p<.05, **p<.01

According to the results of the H test in Table 7, participants' opinions about total distance education (χ^2 (4) = 37,194; p <.01) and personal fitness sub-dimension (χ^2 (4) = 52,659; p <.01) It appears to differ significantly according to looking at the source of these differences, with regard to total distance education and personal suitability, the students in the second year of the third and fourth years; It can be said that 5th grade students have a higher level of vision than those in 2nd, 3rd and 4th grade. Similarly, it is seen that the opinions of the participants about the effectiveness sub-dimension differ significantly according to the class variable (χ^2 (4) = 50-198; p <.01). Looking at the source of this difference, regarding effectiveness, the students in the 2nd grade than those in the 3rd and 4th grade; It can be stated that 5th grade students have a higher level of vision than those in 2nd, 3rd and 4th grade, and additionally, students in 3rd grade have higher levels of vision than those in 4th grade. On the other hand, it is seen that the opinions of the participants regarding instructionalism (χ^2 (4) = 13.466; p <.01) and the sub-dimensions of predisposition (χ^2 (4) = 14.446; p <.01) show a statistically significant difference according to the class variable. Looking at the source of these differences, it can be said that the students in the 2nd and 4th grade have higher levels of opinion than the 5th grade students regarding the relevant sub-dimensions. In this case, it can be said that the class variable is a variable that differentiates the participants' views on distance education.

Table 8. Investigation of Participants' Views in the Distance Education Process According to the Variable of the Place of Residence - Kruskal-Wallis Test Results

	Place of Residence	N	Mean Rank	sd	χ^2	p	Difference
Total VoDE	City Center	180	178,37	2	3,262	,196	Yok
	Town/district	122	160,64				
	Villages	36	155,19				
	Total	338					
Personal Fitness	City Center	180	176,30	2	2,898	,235	Yok
	Town/district	122	166,03				
	Villages	36	147,26				
	Total	338					
Effectiveness	City Center	180	178,24	2	4,406	,110	Yok
	Town/district	122	164,35				
	Villages	36	143,26				
	Total	338					
Tutorial	City Center	180	165,41	2	2,557	,278	Yok
	Town/district	122	168,49				
	Villages	36	193,38				
	Total	338					
Predisposition	City Center	180	170,52	2	1,726	,422	Yok
	Town/district	122	162,90				
	Villages	36	186,79				
	Total	338					

*p<.05, **p<.01

When the results of the H test in Table 8 are examined, participants' total distance education (χ^2 (2) = 3,262; p> .05), personal fitness sub-dimension (χ^2 (2) = 2,898; p> .05), effectiveness (χ^2) (2) = 4.406; p> .05), tutorial (χ^2 (2) = 2.557; p> .05), and predisposition sub-dimensions (χ^2 (2) = 1.726; p> .05) It is seen that there is no statistically significant difference according to the variable. In this case, it can be said that although university students live in the city center, district, town or village during the distance education process, their views on distance education do not change.

Table 9. Investigation of Participants' Opinions According to Family Income Level- Kruskal-Wallis Test Results

	Family Income	N	Mean Rank	sd	χ^2	p	Fark
Total VoDE	0-2499 TL	82	149,29	3	39,402	,000**	1-2; 1-3; 1-4; 2-3; 2-4
	2500-4999 TL	141	143,89				
	5000-7499 TL	77	209,34				
	7500 + TL	38	227,41				

	Total	338					
Personal Fitness	0-2499 TL	82	153,32	3	40,395	,000**	1-2; 1-3; 1-4; 2-3; 2-4; 3-4
	2500-4999 TL	141	141,98				
	5000-7499 TL	77	205,41				
	7500 + TL	38	233,76				
	Total	338					
Effectiveness	0-2499 TL	82	155,60	3	34,904	,000**	1-2; 1-3; 1-4; 2-3; 2-4; 3-4
	2500-4999 TL	141	143,55				
	5000-7499 TL	77	202,04				
	7500 + TL	38	229,86				
	Total	338					
Tutorial	0-2499 TL	82	163,24	3	4,175	,243	Yok
	2500-4999 TL	141	181,97				
	5000-7499 TL	77	158,95				
	7500 + TL	38	158,12				
	Total	338					
Predisposition	0-2499 TL	82	163,74	3	3,140	,370	Yok
	2500-4999 TL	141	166,75				
	5000-7499 TL	77	186,10				
	7500 + TL	38	158,50				
	Total	338					

*p<.05, **p<.01

According to the results of the H test in Table 9, total distance education (χ^2 (3) = 39,402; p <.01) and personal fitness (χ^2 (3) = 40,395; p <.01) and effectiveness (χ^2 (3) = 34,904; p <.01) sub-dimensions differ significantly according to the family income level. Looking at the source of these differences, the opinions of students whose family income is 7500 TL and above regarding total distance education, personal suitability and effectiveness are compared to those of students whose family income is less than 4999 TL; It has been determined that the opinions of the students whose family income is between 5000-7499 TL are higher than those of the students whose family income is less than 4999 TL, and the opinions of the students whose family income is between 2500-4999 TL are higher than those of the students whose family income is 2499 TL and below. In addition, it was observed that the opinions of students with a family income of 7500 TL and above regarding personal fitness and effectiveness were at a higher level than those of students whose family income was between 4000-7499 TL. On the other hand, it was determined that the opinions of the participants on the sub-dimensions of instructional (χ^2 (3) = 4.175; p <.05) and predisposition (χ^2 (3) = 3.140; p <.05) did not differ significantly according to the family income variable. In this case, while the family income variable is a variable that differentiates the participants' general views about distance education and personal suitability and effectiveness sub-dimensions; It can be said that it does not make a difference in terms of teaching and predisposition.

RESULTS AND DISCUSSIONS

In terms of gender, the study found that while male college students had more positive views in the lower dimensions of personal fitness and effectiveness, there was no such difference in the lower dimensions of tutorial and predisposition**.** Başar, Arslan, Günsel and Akpınar (2019) also found that the perception of distance education of male teacher candidates was higher than that of female teacher candidates in their studies, which examined the perception of distance education of teacher candidates. In a similar study, Ozturk (2016) stated that the views of male university students on distance education were more positive than those of female students. Çiftçi, Güneş and Üstündağ (2010), Barış (2015), Kırali and Alçı (2016), Gündüz and İşman (2018) concluded that the views of university students towards distance education were not differentiated by gender.

In his study, which identified the views of university students on distance education, Altunay (2019) concluded that the views of students on personal fitness, effectiveness, tutor and predisposition within distance education do not differ by gender.

In terms of age, it can be said that university students in the emerging adulthood think that distance education is more appropriate in terms of teaching and predisposition. On the other hand, it can be said that university students in the post-emerging adult period generally have more positive views on distance education and they believe that distance education is more appropriate in terms of personal fitness and effectiveness. The reason for this difference can be thought to be due to the fact that university students, who are relatively younger at the beginning of the adulthood, are more digital native than post-emerging adult individuals. As a result, a differentiation can be expected in the expectations of both groups for distance education, as digital natives are better and more easily adapted to the next generation of technology and learning forms than digital immigrants. At this point, the result of this study shows that university students in the emerging adult age range approach distance education in terms of tutor and predisposition; in other words, they focus on the instructive aspect of distance education and personal predisposition levels. On the other hand, it can be said that although the university students in the post-emerging adulthood have a more positive view on distance education due to their relatively digital immigrants, they are more interested in how appropriate and effective distance education is personally. Çiftçi, Güneş and Üstündağ (2010) also used the same age classification in their studies but concluded that the views of university students towards distance education were not differentiated by age. In his study, Ozturk (2016) concluded that age does not differentiate university students' views on distance education with a different classification.

A study conducted in terms of whether or not to receive distance education previously found that university students who previously received distance education had more positive views on distance education generally and in the lower dimension of personal fitness, effectiveness, tutor and predisposition; it was found that there was no such difference. In his study, Ozturk (2016) concluded that the views of university students receiving distance education on distance education were more negative than those of students not receiving distance education.

In terms of having a personal computer, the study found that university students who have a personal computer had more positive views on distance education and in the lower dimension of personal fitness, while there was no such difference in the lower dimensions of effectiveness, tutor and predisposition. In his study, which aims to determine the attitudes of university students towards distance education, Barış (2015) found that the views of students who have their own computer towards distance education are more positive. Similarly, Kıralı and Alci (2016) concluded that the views of university students with computers in their homes towards distance education were more positive.

In terms of class, the study shows that participants' views on the overall and personal fitness sub-dimension of distance education differ significantly. Looking at the source of these differences, it can be said that students in the second grade have a higher level of views on the overall and personal fitness sub-dimension of distance education than those in the third and fourth grades, and students in the fifth grade have a higher level of opinion than those in the second, third and fourth grades. Similarly, participants' views on the sub-dimension of effectiveness differ significantly according to the class variable. Looking at the source of this difference, it can be stated that students in the second grade have a higher level of views on effectiveness than those in the third and fourth grades; students in the fifth grade have a higher level of views than those in the second, third and fourth grades, and in addition, students in the third grade have a higher level of views than those in the fourth grade. On the other hand, participants' views on the sub-dimensions of tutor and predisposition show a statistically significant difference compared to the class variable. Looking at the source of these differences, it can also be said that students in the second and fourth grades have a higher level of views on the related sub-dimensions than those in the fifth grade. In this case, it can be said that the class variable is a variable that differentiates participants' views on distance learning. In their study, Gündüz and İşman (2018) similarly concluded that students' views on distance education differ by class. Looking at the differences, it was found that the views of second and fourth grade students on distance education were more positive than those of third grade students. In addition, it was found that the views of first-year students on distance education were more negative than those of second-and fourth-year students. In this study, this finding differs from the results obtained. In their study at the vocational high school, Çiftçi, Güneş and Üstündağ (2010) also concluded that the views of second-year university students towards distance education were more positive than those of first-year students.

On the other hand, in the study, the participants' views on the overall distance education and the sub-dimensions of personal fitness, effectiveness, teaching, predisposition did not show a statistically significant difference compared to the place of residence variable. In this case, although the university students live in the city center, district, town or village in the distance education process, it can be said that their views on distance education do not change. When the literature was reviewed, to the extent that it was accessible, there was no study that gave the same result directly. However, while Serçemeli and Kurnaz (2020), and Hebebci, Bertiz and Alan (2020) consider this variable only as a demographic variable in terms of sample identification in their study, it is stated in the study of Lily, İsmail, Abunasser and Alqathani (2020) that residents of villages and remote desertions are facing real difficulties in achieving the fruits of distance education because some different variables.

The study also found that views on the overall distance education as well as the sub-dimensions of personal fitness and effectiveness differ significantly according to the family income level variable. Looking at the source of these differences, it was found that the views of students with the family income of 7500 TL and were higher than those of students with the family income of 4999 TL; the views of students with the family income between 5000-7499 TL were higher than those of students with family income below 4999 TL and the views of students with family income between 2500-4999 TL were higher than those of students with family income 2499 TL and below regarding the overall distance education, personal fitness and effectiveness. In addition, it was also found that the views of the students with the family income of 7500 TL and above were higher than those of students with the family income of 4000-7499 TL regarding personal fitness and effectiveness.

In this case, while the family income variable is a variable that differentiates participants' general views on distance education and on the sub-dimensions of personal fitness and effectiveness, it can be said that it does not make a difference in terms of tutor and predisposition. However, it is stated in the study of Lily, İsmail, Abunasser and Alqathani (2020) that by low-income, people are facing real difficulties in achieving the fruits of distance education.

SUGGESTIONS

Students studying through distance learning in the COVID-19 process;

- Views on the overall distance education, personal fitness and effectiveness were all obtained in favor of men. The reason for this may be that men are more interested in technology. For this reason, female students in undergraduate and graduate education can be supported to develop positive attitudes towards technology and to make the distance education process more effective in terms of personal fitness. In this way, female students' views on distance education can also be drawn to more positive points.

- Views on the overall distance education, personal fitness and effectiveness were obtained in favor of those in the post-emerging adulthood period (27+); views on tutor and predisposition were obtained in favor of those in the emerging adulthood period. It can be assumed that this is due to the fact that students who are in the emerging adulthood period are relatively young in the process of discovering their personal learning tendencies. In this case, the distance education process can be advanced interactively and on the basis of mutual benefit with peer support by enabling students at different periods of the emerging adulthood to support each other in the distance education process. In addition, students aged 26 and under should be supported to make the process of transforming distance education into a suitable and effective learning environment at an early age.

- In views on the overall distance education and personal fitness, results have been obtained in favor of those who previously received distance education and had their personal computer. The reason for this may be that the views become more positive with the experience gained, and learning can be designed according to the personal characteristics. In this context, in order for students to make the distance education process more personally appropriate and to look more positively at distance education in general, students should be exposed to distance education from time to time outside the pandemic period, as well as ensure that each student has a personal computer or close facilities. Enabling actions should become national policies by constantly benefiting from the positive effects of the new type of COVID-19 pandemic on distance education.

- All views on the overall distance education, personal fitness, effectiveness, tutor and predisposition had differences in terms of class variable; looking at the basis of these differences, it was found that differences in the overall distance education, personal fitness and effectiveness were more in favor of upper-tier classes; differences in teaching and predisposition were more in favor of lower-tier classes. This may be due to the fact that students in lower-tier classes are at the beginning of their educational lives and are trying to improve their self-learning. For this reason, peer support should be considered between classes, just as in age groups. In this way, an interactive distance learning and experience sharing process should be created. In addition, in order for students to have a positive attitude towards distance education and to benefit from it, some steps should be taken at the first levels of distance education to ensure effectiveness and personal fitness.

- In general, it can be said that the views of students with relatively high family income towards the overall distance education, personal fitness and effectiveness are more positive; on the other hand, family income does not make a difference in terms of tutor and predisposition from the point of view of distance education. From this point of view, open access policies should be followed in the use of distance education services in order to ensure equality of opportunity and opportunity between students. In this way, individuals who do not have high family income should benefit from public environments such as libraries, laboratories for access to distance education. Also, to the extent that it is accessible, different studies can be done that address this variable, since there are not many studies in the literature that focus on this variable.

- In other respects, students' views did not differ according to the place of residence in the distance learning process. This result can be interpreted as an indication that the place where distance education is conducted is more closely related to the state of infrastructure, not to itself. In this context, on the one hand, this variable can be tested in subsequent studies, and on the other hand, questions about the infrastructure can be asked.

- In general, this study revealed perspectives on distance education in the COVID-19 period, but in terms of distance education, it was revealed that Turkish Higher Education has the ability to adapt quickly by managing processes (YÖK, 2020). For this reason, not only during the pandemic period, but also at all times, the opportunities of distance education should be taken advantage of, and in subsequent processes should be made continuous, albeit partial. After all, as Hamutoğlu, Sezen-Gültekin and Savaşan (2019) stated, in contrast to traditional face-to-face education, distance education, which offers individuals the opportunity to receive education without having to physically be in one place, can be said to provide convenience in terms of ensuring equality of opportunity in education and benefiting from the right to education.

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Axiological Aspects in Higher Education Environment in Latvia: Comparison of Students and Academics' Values

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Abstract
Values are essential prerequisite for society's, including education and science, development, thus in 21st century philosophy emphases shifted from knowledge to values clarification and values promotion (Oleś, 2020). Quantitative research is implemented within international project "Gender Aspects of Digital Readiness and Development of Human Capital in Region" to analyse students and academics' values in Latvia, applying cultural dimensions model (Hofstede, 2011). In research 26-item five-dimensional scale of individual cultural values - CVSCALE (Yoo, Donthu, & Lenartowicz, 2011) is used assessing such cultural values as *Power Distance*, *Uncertainty Avoidance*, *Collectivism*, *Long-Term Orientation* and *Masculinity* at individual level. Results of Mann-Whitney Test for quantitative data processing in SPSS environment confirm existence of statistically significant differences in *Uncertainty Avoidance* ($p \leq 0.05$) and *Collectivism* ($p \leq 0.001$) assessment – students, comparing with academics, pay more attention to them, which confirms students' desire to live in predictable environment with clearly defined regulations and apply collective cooperation synergy for long-term goal achievement.

Keywords: Values, Culture, Students, Academic Staff

Introduction

Understanding of culture changes dynamically. Geert Hofstede (1980) defined culture as "the collective programming of the mind which distinguishes members of one human group from another" (Hofstede, 1980, 25). Due to increasing impact of globalization nowadays culture is interpreted as shared patterns of behaviours and interactions, cognitive constructs and understanding, including group skills, knowledge, attitudes, values and motives acquired in the socialization process (Makarova, Makarova, & Korsakova, 2019).

The model of cultural dimensions consists of 5 dimensions, emphasising the micro (state) context. The first dimension *Power Distance* is defined as "the degree of inequality among people which the population of a country consider as normal: from relatively equal (that is, small power distance) to extremely unequal (large power distance)"; the second dimension *Uncertainty Avoidance* as "the degree to which people in a country prefer structured over unstructured situations" ; the third dimension *Individualism* is "the degree to which people in a country prefer to act as individuals rather than as members of groups"; the fourth dimension *Masculinity* is "the degree to which values like assertiveness, performance, success and competition, which in nearly all societies are associated with the role of men, prevail over values like the quality of life, maintaining warm personal relationships, service, care for the weak, and solidarity, which in nearly all societies are more associated with the role of women" (Hofstede, 1994, 5-6). In its turn, *Long-Term Orientation* is directed towards the future and related to life goals.

In later studies the scale of Hofstade's Five Value Dimensions of Culture was used to assess the individual level of cultural dimensions, which enables us, based on cultural orientations, to analyse the individual attitude and behaviour on the individual level (Yoo, Donthu, & Lenartowicz, 2011), as every individual has got a unique cultural mosaic , according to which they can either accept or deny national cultural values, so that they would suit their needs best (Kramer, Shuffler, & Feitosa, 2017), focusing on the impact of work ethics, responsible action, motivation, management style, initiative of entrepreneurship, risk management and other behavioural aspects on the economics (Mack & Pützschel, 2014).

Every social group consists of a set of individuals. Social groups have unifying features, whereas each personality is also characterized by individual cultural characteristics, that are related to values and their formation factors. The aspect has been analysed wider in relation to the teacher's identity developed in the Teacher's Identity Research Model (Medveckis, 2016), in which the aspect of social institution impact has essential role. The analysis of education influencing factors studied in our research focus on the global level does not have a dominating role. However, on the mezzo and macro level which affects the culture and education policy implemented by the municipality and state, it influences essentially the processes going on in the education space at schools and education, as well as on the personality level when reaching every individual, we are convinced of the uniqueness of the personality and individual cultural values.

In the context of the research, when analysing the students and academic staff's individual cultural values, the latest meta-analytical research on the correlations between the orientation dimensions of the national cultural values and the results of scientific research and their impact are important (Abraham, 2020), also about interaction of cultural differences with the virtual reality, predicting how cultural values influence the work of virtual teams (Kramer, Shuffler, & Feitosa, 2017).

Analysing data for 60 countries, it was found out that *Individualism* correlates positively with the research impact, but negatively – *Uncertainty Avoidance* and *Power Distance*. Whereas, the only variable that correlates positively with the research results is *Individualism* (Abraham, 2020). The negative *Power Distance* correlation between the research impact is explained by the negative correlation with democracy previously found in scientific studies, realizing that the low level of democracy in the academic environment reduces experience sharing possibilities of scientific discoveries and discussions, also concluding that it delays application of research outcomes in state policy development, without providing a link between science and national economy (Branscomb & Rosenberg, 2012; Maleki & Hendriks, 2014; Goaied & Sjöland, 2019).

Under the circumstances created by the Covid-19 crisis in order to overcome challenges in education, increasing the proportion of distance learning for a successful and efficient learning process provision, it is important to rely on scientists' findings- synchronous virtual tools with high informative value orientated towards relations, will most often be chosen by virtual teams where *Collectivism*, *Femininity*, *Short-Term Orientation***,** high *Power Distance* and *Uncertainty Avoidance* dominate; whereas asynchronous virtual tools with high informative value orientated towards tasks will most often be chosen by the virtual teams where *Individualism*, *Masculinity*, *Long-Term orientation*, low *Power Distance* and *Uncertainty Avoidance* dominate (Kramer, Shuffler, & Feitosa, 2017).

Cultural dimensions influence not only the national economy in general, but also such economic growth indicators as

- quality of education – the research results show that *Uncertainty Avoidance* and future orientation correlate negatively with the pupils' learning achievements in the PISA research (Chlebounová, Odei, 2019) and learning as the education quality criterion – for all dimensions of culture, except for *Uncertainty Avoidance***,** correlation with learning from experience and own mistakes has been identified (it was higher assessed by the employees in who *Collectivism* and *Long-term Orientation* dominates, whereas the employees in who high *Masculinity* and *Power distance* dominate, assessed learning from experiences and their mistakes much lower (Zotzmann, Linden, & Wyrwa, 2019);
- health (Masood, Aggarwal, & Reidpath, 2019), concluding that relations between personal values and health impairments are regulated by cultural context (Heim, Maercker, & Boer, 2019);

- career (Ismail, Atikah, & Hou Lee, 2016) and the necessary leadership for its development, highlighting the importance of *Collectivism* dimension in its development (Islam, 2014).

Pedagogues "see the society with high power distance, above moderate level in terms of avoiding uncertainty and individualism and close to feminine values" (Kursad, Yahya, & Elif, 2016, 191), but young people, out of who many are students, are considered as one of the most complicated intergenerational cohorts described as Independent, Diverse, Engaged, Knowledge managers, Pragmatic, Personal brands and Collaborative (Witt & Baird, 2018).

The research "Axiological Aspects in Higher Education Environment in Latvia: Comparison of Students and Academics' Values" has been carried out with a goal to analyse the students and academic staff's individual cultural values.

In order to reach the goal, the research issue was set – are there any statistically significant differences in the assessment of individual cultural values of students and academic staff?

Method
In the research 2019-2020, 237 respondents from 4 higher educational establishments in Latvia (University of Latvia, Liepaja University, Daugavpils University and Rezekne Academy of Technologies) took part: 182 students and 55 representatives of the academic staff.

In order to obtain the primary quantitative data in the research, the scale of individual cultural values – CVSCALE was used (Yoo, Donthu, & Lenartowicz, 2011).

The Cronbach's Alpha Coefficient for checking plausibility of the test on the scale *Power Distance* (α=.866), *Uncertainty Avoidance* (α=.828), *Collectivism* (α=.899), *Masculinity* (α=.755) and *Long-Term Orientation* (α=.775) indicates to internal coherence as acceptable and good.

In order to determine the empirical division, the Kolmogorov-Smirnov test was used. As the empirical division did not comply with the normal (p=.000), the non-parametric data processing methods- Mann-Whitney U Test was used for the secondary quantitative data acquisition to state differences between two independent selections.

In order to assess the criteria and indicators of individual cultural values, the Likert's scale was used in the range from 1-7, where 1- absolutely disagree, 2- disagree, 3- rather disagree, 4- neither agree nor disagree, 5- rather agree, 7- absolutely agree.

Findings
Respondents' profile (status) influences the hierarchy of cultural values. Statistically important differences ($p \leq 0.05$) have been found in the assessment of two individual cultural value criteria: *Uncertainty Avoidance* and *Collectivism* (see Table 1).

Table 1. Indicators of descriptive and inferential statistics of individual cultural values

Dimensions	p	U
Power Distance	.116	4200.000
Uncertainty Avoidance	**.001**	3466.000
Collectivism	**.049**	4037.500
Masculinity	.865	21283.500
Long-Term Orientation	.442	4551.000

Even though the future is associated with "*an equation where all its variables are undefined*" (Duda & Dziurzyński, 2019, 30), predictability is one of the most important value-orientation aspects, also in the higher educational environment in Latvia.

The results of the Mann-Whitney U Test show that there are statistically very important differences (p=.001) in the *Uncertainty Avoidance* assessment – students (Mean Rank=121.80) evaluate it higher than the representatives of the academic staff (Mean Rank=105.28).

Due to the comparatively large proportion of elderly academic staff, in Latvia higher educational establishments life experience is different in comparison with the students out of whom the vast majority are young people. It is objective that elderly people have encountered bigger changes in their lives – the change of political and economic systems, changes of the monetary policy, financial crisis, money reforms, also changes in social structure which affected the sphere of culture and education. It means that the social experience has prepared and hardened the academic staff more for the possible changes. Younger people have less life experience and they do not have such great social experience as the elderly generation who have acquired adaptation strategies in changeable conditions.

When starting their studies, in the first study year students are faced with differences of the education process in comparison with the learning experience obtained at school. From the introduction into the speciality or introductory course studies students expect instructions on the course of studies, on the work principles of the higher educational establishment, support system meant for students and inclusion into the social life which is related to the student self-government issues, sport, artistic self-expression and leisure opportunities.

Students' reflection on aspects of educational values is mostly based in a relatively short time of the study process. Not all students have encountered, for instance, a full cycle of international accreditation of study programmes, which can also exceed the time of full-times studies. In its turn, the academic staff who also perform scientific and administrative functions, know the course of the programme development and transformation, they can compare the process from expectations to implementation. Students can get acquainted with the study programmes, which have been developed in compliance with the standards determined by the national education policies, before starting their studies. Programmes of the study course have got a similar situation, in whose descriptions the most essential conditions for a successful study course acquisition have been included. It is clear that the specifics of study courses may differ, as well as the ways of the lecturers' content presentation, methodological approach and applied didactic models, which in separate cases can cause confusion in the students' environment if their current experience contrasts with their predictions and expectations.

The received feedback at the end of the course shows that students provide a positive assessment of the study course, even though its acquisition has required a great effort, if they know for sure what and how has to be acquired, how the knowledge will be tested, what competences will be acquired and what the expected outcome is. It is important that students assess the results of their performance highlighting the benefits from their peers in seminars, group work, in cooperation with lecturers.

Students acknowledge that a standardized work order is useful which enables them to plan their time, predict work intensity depending on their own individual peculiarities; also it is important to know the terms that have to be fulfilled and how the activities of the academic and social work, sports achievements and cultural involvement and organizations are assessed, which opens up different opportunities. First of all, it relates to student competitiveness in relation to the budget places allocated by the state, certain grants and various social benefits.

The results of the Mann-Whitney U Test show that there are statistically very importance differences (p=.049) in *Collectivism* assessment – students (Mean Rank=122.69) evaluate it higher in comparison with the representatives of the academic staff (Mean Rank=102.27).

Understanding and significance of collectivism have experienced significant changes from the students and academic staff's point of view during the last decades. Before the restoration of independence, the values glorified on the declaration level actually derogated human as a personality's individual needs, scarifying them for a collective benefit. That in itself would not be a bad thing, as, for example, it is realized by the socially responsible policy of Nordic countries. Life standards of Nordic countries and individual's welfare depended on the formation of the solidarity support system vis-à-vis the Soviet regime, where the fruit of the collective benefit cannot be really felt by any individual. During the Soviet times in higher educational establishments, in the absence of significant competition, as it is understood in democratic conditions, there was a real cooperation, leisure time activities. However, with the transition from a planned economy to a free market economy, in academic circles there emerged a tendency to strengthen their individual positions, providing the necessary priorities for oneself in the conditions of competition. Inclusion of the new generation's academic staff or belonging to a certain collectively formed structure can be explained with it in order to self-realize, develop own personal career, benefiting from the social group in their own interests.

In the elderly lecturers' memories collectivism dominates as a value. The conversation quote includes information which without any extra comments for the younger generation cannot be understood, for instance, that rectors were appointed as nomenclature staff, that the division of material resources took place according to a plan or one could obtain them using acquaintances in State Distribution structures:

Well, we went on excursion, yes. The group of people in the excursion is smaller. How many people can get on a forty-seat bus. We have had very beautiful students' excursions. Study tours were mandatory. Mukins (the rector) got a bus from the State Plan the same year. Now we cannot imagine what a value is and what a value is not. Mukins arrived in the autumn, and in the winter we already had a bus. The first trip was for teachers to ski in Bernati. Then we had a bus (Higher Educational Establishment), and we travelled everywhere, and now we do not have a bus and neither any money (Medveckis, 2004, 22).

There is no strong rivalry for students at their higher educational establishment, except for the cases within their academic groups or faculty, when it comes to negotiations about budget places, scholarships.

The predictions made that the market place will be overtaken by the network due to the change of paradigms or conceptual system which have happened during this millennium or the new age of access, property rights will be replaced by access, influencing also understanding of the concept of personality, where the idea of an autonomous personality, existing in space, will be replaced with the idea about a changing personality that depends on others and exists in time (Rifkin, 2000), have become reality nowadays. Young people practice successfully cooperation implementing various initiatives and projects in the physical and virtual environment (Witt & Baird, 2018).

Overall, young people have got a strong socializing tendency and in social groups, which are established on the basis of mutual interests, strict limitations of personal interests and ambitions are more essential than for the academic staff, for instance, in cases when one has to take part in team sport or erudition games, personal preferences must be abandoned, if you are a member of an artistic group or cooperation.

During the study process students have acquired cooperation skills in group and project work. However, the research does not reveal the cooperation motives, it only ascertains that the collective interests are respected which can be interpreted as social responsibility in front of their group. Nevertheless, it can also have mercantile interests as a hidden respect of collective cooperation and collective interests in order to get satisfaction as a member of group in case of group success.

The wording in Subjunctive Mood included in the research questionnaires shows that respondents' (students and also representatives of the academic staff) evaluation of *Power Distance* does not differ statistically very much and they have a similar attitude to values which is related to the relationships between subordinates and managers determined by quality rather than quantity. It could be perceived as the must-have element which is directed towards an ideal order and social agreement, where everybody complies with mutually accepted behavioural norms, standards of conduct and hierarchical subordination is only a component of the division of functional responsibilities, but not a condition and criterion of mutual relations.

In an educational institution, "the base of the success for leader's leadership and management processes is awareness and implementation of staff and students' democratic management" (Pigozne et al., 2019, 356), which is promoted by the "leader's charisma, ability to attract motivated staff and provide an optimal material and technical base, appropriate for modern requirements, have got an essential importance in the management process" (Pigozne et al., 2019, 356) for education quality provision in the cultural dimension *Power Distance* of the higher educational establishment.

The democratic management style is based on coming to a consensus and decision making after discussions and having heard all the people involved in the argument processes. It is a time-consuming process. Urgent decisions often have to be made during the course of dynamic development of events which is carried out by the people with the legal powers conferred on them. Depending on the decision and the action taken, there are certain consequences. In the hierarchical system of positions leadership style plays an important role by all means, which is based on the personality's culture, ability to solve complex problems in a tolerant and open way which sometimes affects subordinates' interests. Middle managers have to take into account that their activity and pressure of the work quality assessment will be from both the senior management and subordinates. In the higher education system, the central axis is formed by students who feel the microclimate fluctuations in their study environment, which depend on the internal cultural management processes. Assessment of the students who have study experience in different Latvia and foreign higher educational establishments is important. In relation to changes in thinking during the transition from one political system to another, a long way had to be completed, which has been acknowledged by the first democratically elected rector in Latvia Karlis Dobelis:

There have been moments when you do not know how to act. Awakening started. Firstly, freedom did not arrive at once, let us say, on a particular day. Secondly, independence did not mean freedom of spirit. I think we still felt chained internally (Medveckis, 2009, 15).

In higher educational establishments, in which there are a clear management of processes, certain progress of documents, quality management processes are implemented, it is possible to apply process management and document circulation remotely, reducing the impact of *face-to-face* factor of the human contact. In the society a tendency can be observed that senior officials would like to expect a hearing, dialogue formation and common decision-making of those involved in controversial situations, which is aimed at achieving goals that are understandable to all. Goal clarity has to be based on social and cultural values. However, regarding attitude towards subordinate institutions, for instance, the reforms implemented by the Ministry of Education and Science, without sufficient involvement and listening to the views of social partners, social tensions are sometimes caused.

After the restoration of independence in 1991 a new generation has emerged in Latvia and lots of its representatives are students right now. Equality of women and men's rights is one of the multiple values that is situated at the top of the youth value hierarchy and are personally important. At the same time, the time of independence also affected the elderly people's value-orientation. Possibly, it explains why in *Masculinity* assessment no statistically significant differences between students and academic staff were found.

The topicality of gender equality in modern globalization conditions has been marked very boldly. International mobility of students and academic staff enables them to get to know other cultures. One of the elements describing culture is the division of roles between men and women based on traditions, religious beliefs, as well as the values accepted in the particular cultural environment supported by social institutions.

In the relatively unchangeable cultural environment social institutes and also human mutual relationships self-evidently functioned in relatively constant forms. Due to the development of science, technologies etc. factors, the issue of overcoming stereotypes regarding male and female occupations, insight into the need for a level of remuneration based on gender characteristics, holding senior positions etc. is becoming increasingly debatable.
During the last decades in higher educational establishments in Latvia women have often been elected as rectors, for instance, four women have been performing the duties of the Rector at Liepaja University since 1976, out of whom only two were elected after the restoration of Latvia independence in 1991. Up to the restoration of independence in the higher education system of the Soviet Union a woman rector was rather an exception than a norm.

Long-Term Orientation assessment does not differ essentially between the students and academic staff. *Long-Term Orientation* and/or *Short-Term Orientation* is greatly influenced by understanding of quality of life, distinguishing 2 of its types: statistical understanding (the quality of life is the goal or result to be achieved or achieved; in this aspect the quality of life will always be insufficient and there is a big probability of obtaining consumer manifestations to it) and dynamic understanding (the quality of life is the very process of life improvement – a set of intentions and activities directed towards welfare improvement, application of opportunities, cultivation of abilities, dependent on capacity and provided satisfaction) (Tisenkopfs, 2006).

Nowadays living just for today is not as distinct as it was in the surveys about the quality of life carried out several decades ago, which can be explained with the fact that there were unclear terms for future planning, there was a lack of confidence in the stability of the economic situation, people felt safer in their routine situations. Encountering problems of medical character, social security concerns, more and more people start thinking about the ways how to provide stability for their future, mostly relying on their own strength (Quality of Life in Latvia, 2006).

Material wellbeing, which could provide not only a sufficient level of livelihood and comfort, but also satisfy the increasing demands for culture and education, is still priority for lots of people. Reassessment of values mostly happens during crisis. The elderly generation's system of values, who have faced the difficulties of World War II and post-war, differs from the younger generation. The current difficulties do not seem so tragic for the elderly generation, as it was during the war and post-war period when the concerns about survival and safety were the decisive ones. The situation caused by Covid-19 for lots of people became the cause of their personal emotional and economic crisis and mirror of values. The young people's common comfort level has changed and they perceive the changes, which restrict contact opportunities, in a much more aggravated way than the people of the elderly generation.

Due to the global spread of COVID - 19 virus which reached pandemic proportion, inhabitants of Latvia felt strongly the impact of preventive measures on their common lifestyle, but did not suffer from the consequences caused by the virus so much. Socializing habits in the virtual environment became more intense which was confirmed by the information from IT companies on sharp increase in data traffic (Skupelis & Haka, 2020). In Latvia the capacity of technological provision, for instance, provision of the internet resources and network coverage, is on a high level. However, during the study process at schools and higher educational establishments up to the beginning of the crisis, it was not necessary to use the types of distance learning so intensively. An important provision of distance learning content and communication rested on teachers' shoulders, whereas the skills of technology application were not an essential obstacle neither at schools nor higher educational establishments. Pupils' location outside the school learning environment caused lots of challenges not only for teachers, but also parents who had to provide on most occasions several pupils in one family with an appropriate work environment and technical support.

The biggest discomfort was created by the restrictions to gather together and be in one room with the people who are not from one household. Also, the factor of travelling restrictions was and still is psychologically traumatic. Students' mobility, provided by the ERASMUS support system, lecturers' international mobility related to conference and seminar attendance caused not only problems of an economic character, but also reduced advantages of direct communication, cultural relations were restricted. The economic sector related to tourism has suffered both locally and globally, impoverishment of cultural life is also important, which restricted the practice provision for students of art studies. New initiatives emerged after a short period of downtime, for instance, provision of concerts, theatre performances in the digital environment. However, it could not compensate fully the effect of emotional performance of direct contact.

The new situation in the long-term understanding context has given a positive impetus for a fuller application of digital resources, opening of new communication channels for mutual communication. Significant economic benefits are the elimination of unjustified business trips and use of transport if it is possible to arrange meetings online, provide lectures and seminars remotely which is not affected by the location of the people involved in the communication.

Results, Conclusions and Recommendations

The fundamental values at every higher educational establishment or its structural units are sustainable if they are based on mutual respect, support and democracy which is strengthened by the awareness of the collective identity confirmed by the hierarchy of students and academic staff's individual values. However, the open global space of education enables us to get to know values of other countries and cultural environments, and, assessing them critically, accept and adapt them or deny them and refuse from them. The respondents' status at higher educational establishments affects the hierarchy of *Uncertainty Avoidance* and *Collectivism* values – students are tended to assess these individual cultural values higher in comparison with the representatives of the academic staff, but in the assessment of such individual value dimensions as *Power Distance*, *Masculinity* and *Long-Term Orientation* there are no statistically significant differences.

Due to the development of technologies, the structure of cultural consumption and attitude to that have changed. The younger generation, especially students, in comparison with the academic staff's representatives of the elderly generation frequently use the offered opportunities of listening to music online and downloading it, they more often exchange digital videos and sound files, read information, including literature in the electronic environment, but the elderly generation devote their time for art and culture enjoyment attending the theatre, concerts, exhibitions.

The gravity of values is illuminated in crisis situation, in which both the strengths of collectivism and individual cultural values are revealed, which can be confirmed not only on a declarative level, but also assessing people's attitude and action. Entertainment, organized corporative activities for employees' cohesion, for example, traditional events of sports, excursions during the Covid-19 pandemic affected the communication culture and revealed the psychological contact problems of forced long-term contact with a narrower circle of people. The academic staff's self-sufficiency and tolerance towards restricted contact intensity differed from the youth with the fact that the variety and dynamics of activities in the student environment during the pre-crisis period was wider. Students felt discomfort more because they could not meet up with friends, could not get involved in different common entertainment, sports, artistic creation activities. Crisis situations are a challenge for the practice reinforced by the routine. However, the search for its overcoming unfolds the creative and intellectual potential to acquire and multiply the previously performed activities in a different way, saving financial resources, also developing human capital.

In the higher education space in Latvia the identified students and academic staff's individual cultural values are not identical with the domination national cultural values, but they are an important resource for such quality of life indicators as health, career and national economic growth improvement.

Plagiarism Rate = 1 %

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Assessment of the Impact of Education on the Use of Labor Resources as a Tool Instrument of State Social Policy

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Abstract
It is known that the main productive force of society is the labor force. Quantitative and qualitative level of labor resources and their use is a key component of sustainable economic development of the country. Maintaining a high economic growth rate is closely linked to the constant innovative improvement of the quality of labor resources and increased labor productivity. However, in the context of globalization of social, economic and financial relations, the rate of economic growth depends on the level of use of labor resources. The solution of the existing demographic and socio-economic problems depends on a significant improvement in the qualitative and quantitative characteristics of the labor force. The role of the state in this area is especially important. Improving the use of labor resources depends on the social policy pursued by the state. The active role of the state in the implementation of the social structural policy is also needed to improve the development trends in the use of labor resources. Effective social policy gradually changes the social structure of society, improves the active characteristics of a certain social class, manifests itself in the process of relations with other people in connection with the creation of spiritual and material wealth. The development of strategic management and the implementation of new social policies, in turn, is the result of the development of human capital in society. These social processes are interconnected and interactive. The development of social needs is the most important mechanism for the accumulation of labor resources. The needs and interests of social groups in the accumulation and successful circulation of labor resources are grouped according to consumption patterns and directly depend on the level of income. In general, the complexity and diversity of the problems of efficient use of labor resources make it necessary to study them comprehensively. Ensuring the efficient use of the country's labor resources is one of the most important tasks in the development of the socio-economic complex. In order to solve these tasks requires an objective assessment of the most efficient and complete use of labor resources based on the interests of the whole society. All these aspects show the relevance of the topic of the article. The article assesses the need for the implementation of state social policy and its impact on the country's labor force. The current situation with the use of labor resources in Azerbaijan was analyzed, and the state policy in this area was considered. Quantitative and qualitative characteristics of labor resources have been explored, ways of their effective use have been investigated. The suggestions of a recommendatory nature have also been made to improve the use of labor resources. The results obtained can play an important role in assessing the efficient use of labor resources, both at the state level and in various enterprises and organizations. The development of the article is based on the methods of comparison, development dynamics, factor analysis.
Key words: social policy, labor resources, training, education, population.

Introduction

A systematic, comprehensive study of the economic problems of labour, labour activity, human resources is the main requirement of modern times. The problem of achieving a profitable and effective result of labour is primarily due to the labour force and its creative potential. In this regard, the efficient use of labour resources is a complex and multifaceted problem. The solution of this problem requires knowledge of various economic, social and demographic factors, as well as the specific characteristics of each enterprise, region and the country as a whole, and on this basis to determine ways to effectively use the labour resources of society. The main factor of socio-economic development of any country is labour resources. The labour force is the able-bodied part of the population that has the physical and intellectual capacity to produce material goods or provide services. The basis of the labour force is the economically active population of the country. This includes not only busy people holding any position in the enterprise and organization but also unemployed people with low levels of education or complexity due to various factors. The quantity and quality of labour resources change under the influence of demographic and socio-economic factors. Economic growth depends on the increase in the quantity and quality of labour. In terms of quality, the country's labour force is characterized by the level of education, professions, degree of health, cultural and moral level of the working population, as well as creative potential and mobility, and in terms of quantity by the able-bodied population. A characteristic feature of any economic system is the improvement of human natural and acquired ability to work as one of the powerful factors in improving the quality of products and services, increasing productivity and labour efficiency, and expanding the volume of social production in general (Guliyev, & Mammadov, 2007). Therefore, the development and improvement of the use of labour resources is the main focus of state social policy. The study, preparation, retraining, professional development, selection and placement of labour resources is a very important part of the work in the field of social policy of the state.

In recent years, social policy issues have become one of the key issues in almost all countries of the world, including Azerbaijan. The success of any state at the international level depends on how society lives and develops. Social policy aims to create a material basis for improving living conditions as a result of human economic activity. Social policy is one of the most important areas of state activity to increase the effectiveness of the social system and its individual relations. In a modern market economy, this area of activity is mainly managed and regulated by the state. The state determines the strategy, goals and objectives, financing of social policy. The implementation of social policy at the national level is organized through strategies, concepts and programs developed for the long, medium and short term. In essence, the ultimate goals and results of economic growth are expressed in social policy, which necessitates the efficient use of labour resources. Ways to ensure the efficient use of labour resources can be obtained on the basis of analytical methods such as factor analysis, comparison, development dynamics, generalization, grouping and so on. Based on these methods, first of all, let's consider labour resources as an object of state social policy.

Educated labor resources as an object of state social policy

The goal of social policy is to consistently increase the living standards of the population and reduce social inequality by ensuring access to social benefits, quality education, medical and social services for all. Some researchers interpret the social policy of the state as a system of measures aimed at optimizing the social development of society, regulating relations between social groups, as well as creating the necessary conditions to meet the needs of life (Fedorova, & Minchenkova, 2013). The implementation and effectiveness of social policy goals are closely linked to the state budget support and financial sources. Therefore, without sufficient financial investment, it is practically impossible to achieve the successful development of a certain area of life, such as education, health, the labor market and labor relations. In relation to the labor market, social policy is primarily associated with the state's ability to influence labor demand.

Social policy should focus on solving priority problems, developing mechanisms for the efficient use of resources allocated for social purposes, and linking the financing of government obligations with real opportunities. It is necessary to solve these problems on the basis of state standards, develop the principles of self-financing and insurance, and strengthen the financial base of the social sphere.

One of the main tasks of social policy at this stage is to protect the population from the negative effects of market relations. This can be achieved by maintaining a balance between the income and commodity resources of the population; creation of favourable conditions for improving the lives of citizens; development of the public service sector; meeting the demand for quality of goods and services; strengthening the health of the population, expanding the material base for the development of education and culture.

Social policy is a priority part of the state, as well as the most important area of public interest. This is due to both the level of social development and the main goals of society. It has a direct impact on the state of the social sphere, which is a key indicator of the level of economic development of society (Cheremisina, & Sribny, 2019).

The main directions of the management mechanism of social policy are related to the formation and development of human capital. The priority of the modern economic system is the formation of a healthy, educated, knowledgeable, constantly evolving person. Without understanding the laws of the process of human capital development, it is impossible to implement state policy in the field of employment, education, health, regulation of labour relations. It is important to substantiate the socio-economic development of human capital as a result of purposeful activities of the state, individual organizations and individuals. Today, the role of human capital is growing rapidly and is becoming one of the important factors of social progress. The higher the quality of human capital, the level of knowledge and creativity, the ability to adequately adapt to rapidly changing economic conditions, the higher the competitiveness of the country and its economy. Therefore, the development of sectors that have a direct impact on improving the quality of human capital is particularly important, and these sectors include social services such as health, education, science, culture and so on.

The quality of life of every person largely depends on the development of social services: the education system ensures the citizen's integration into society and preparation for work; health care maintains normal physical condition; culture is called to promote the spiritual development of the individual, to preserve the integrity of society and the continuity of generations; social protection ensures the stability of people's material conditions at different stages of life, at different levels of life. These are ultimately characterized as factors that shape human capital.

In recent years, the topic of human capital has become increasingly relevant in Azerbaijan, and various considerations and opinions are put forward about its essence and content.

Naturally, both carriers of labor, employers and the state should be interested in the formation and management of human capital. No one can solve the problems that arise in the process of formation, management and development of human capital alone. These problems are mainly as follows:

- whether there is an education (higher and vocational training) system that provides high, comprehensive and perfect knowledge, and at the same time accessible to everyone;
- formation of education system employees interested in providing high, comprehensive and perfect knowledge and student contingent interested in acquiring such knowledge;
- major updating of the material and technical base, library fund of all structures engaged in staff training and included in the education system;
- increasing state support for these areas, financial resources allocated to these areas to improve the quality of education, science, research;
- creation of appropriate jobs for people with high knowledge and professional training to effectively use their potential and provision of comprehensive (legal, financial, tax, etc.) support by the state to business structures that create such jobs (Aliyev, 2016).

As can be seen, the main task in solving the problems arising in the process of formation and management of human capital falls on the state, and the state must fulfill this task for the rapid development of the country's economy and the well-being of the people. In this case, it is possible to form an effective labor force in the country. Therefore, labor resources should be assessed as an object of state social policy.

Improving the management mechanism of social policy leads to the formation of human capital, increasing labor productivity, changing the social structure of human life and, therefore, the social reconstruction of society as a whole. All these aspects make it an important task to improve the efficient use of labor resources. Effective economic activity in the country is possible only if there is a sufficient labor force with a sufficient level of quality and a stable motivation for development. It is the labor force, whose conditions are determined by objective and subjective indicators, which are subject to changes at different stages of a person's life, and which are built and developed under the influence of a combination of forces and factors inherent in different levels of systems.

Findings

The effective functioning of socio-economic systems determines the effectiveness of the development of the quality of labour resources at different stages of human life. This is reflected in the growth rate and sustainability of quality changes in the labour force. Improper organization of the work of socio-economic systems not only has a negative impact on the current state of the labour force but also slows down the pace of development of elements of other levels of systems. This ultimately has a negative impact on the implementation of social policy.

At the macro level, the study of labor resources clearly shows its connection with the level of development of social production. The labor force includes able-bodied people who work in the economy as well as those who are not. As an economic category, labor resources represent the economic relations formed in society at a certain stage of development during the production, distribution, redistribution and use of the able-bodied population in various sectors of the economic complex of the country. The labor force is the able-bodied part of the population who have the physical and intellectual capacity to produce wealth or provide services (Kibanov, 2019).

In a modern, innovative economy, labor resources are the main productive force of society, which, according to their physiological, psychological and intellectual qualities, create added value and can participate in socially useful production. Therefore, the development of society is associated with the added value created by human labor. At the micro level, the level of specialization of personnel directly affects the competitiveness of companies. Therefore, the problem of training educated young professionals is relevant in modern conditions (Lapshova, 2017).

The main part of the country's population is the labor force provided with physical development, knowledge and skills. It is easier to measure labor resources than labor force. According to international statistics, the labor force includes the population aged 15 to 65 (Hajizade, 2006).

Ensuring the efficient use of the country's labour resources is one of the most important tasks in the development of the national economic system. In order to solve this, an objective assessment of the most efficient and complete use of available labour resources for society is required. Analysis of the efficient use of labour resources in the Azerbaijani economy can be carried out on the basis of data reflected in official statistics.

Table 1 – Labor resources in Azerbaijan (thousand people)

	2005	**2010**	**2015**	**2017**	**2018**
Total	**5421,3**	**6015,0**	**6335,9**	**6408,1**	**6478,2**
including: number of the working-age population	5304,0	5875,7	6198,7	6262,2	6326,7
persons over working-age engaged in the economy	103,8	133,1	137,2	145,9	151,5
persons under the age of 15 engaged in the economy	13,5	6,2	-	-	-

It can be seen from Table 1 (Statistical Indicators of Azerbaijan. 2019) that the number of labour resources in the country in 2018 was 6478.2 thousand people, of which 97.67% is the number of the working-age population.

2.33% are persons over working-age engaged in the economy. Compared to 2005, the country's labour force was 1,056.9 thousand people or 19.5%, compared to 2010, 463.2 thousand people or 7.7%, compared to 2015, 142.3 thousand people or 2,2%, compared to 2017 increased by 701 thousand people or 1.1%.

The main productive force for the development of social production is the part of the population that has a combination of physical and mental abilities that allow it to work. The able-bodied population is a part of the population limited by certain age limits. The limits of working age are determined by socio-economic conditions and physiological features of human development. The initial boundary is determined by a person's physiological development, level of education and duration of training. It should be noted that the retirement age of the population is determined by the Law of the Republic of Azerbaijan on "Age pension". According to this Law, the retirement age of men was determined from 01.07.2017 to 01.07.2021 (63 years 6 months to 65 years), and from 1 July 2017 to 01.07.2027 (60 years 6 months to 65 years) of women (Law of the Republic of Azerbaijan "On labor pensions", 2017)

Raising the retirement age raises some issues related to the elderly. The perspective toward aging, beyond providing care to old people, some subjects should be discussed such as integration with society, gaining missing status and roles again, increasing functions, and utilizing free time effectively (Arslan, Karanfil, & Titrek, 2016) .

The formation of the age limits of the able-bodied population is determined not only by the objective conditions of the physiological development of people but also by social relations, which affects the formation of the demographic structure of the able-bodied population and its distribution within the country. In modern conditions, the economically active population acts as a producer of all material and spiritual goods, a carrier of complex labour characteristics that determine the means of scientific, technical, economic, spiritual and social development, the main source of income. Therefore, the analysis of the dynamics of growth of the economically active population in Azerbaijan over the years is of great interest.

Table 2 - Number of economically active population in Azerbaijan

	2005	**2010**	**2015**	**2017**	**2018**
Number of economically active population - total, thousand people	**4380,1**	**4587,4**	**4915,3**	**5073,8**	**5133,1**
Number of employed population - total, thousand people	4062,3	4329,1	4671,6	4822,1	4879,3
Number of unemployed population - total, thousand people	317,8	258,3	243,7	251,7	253,8
Persons officially registered as unemployed in the employment services, person	56343	38966	28877	38481	20088
Men	27265	21979	17728	24496	12608
Women	29078	16987	11149	13985	7480
From them: those receiving unemployment benefits, total	2087	87	1543	6974	1117
Men	1316	70	1087	4748	668
Women	771	17	456	2226	449

As can be seen from Table 2 (Statistical Indicators of Azerbaijan, 2019) , the number of the economically active population in the country in 2018 amounted to 5133.1 thousand people, of which 4879.3 thousand people or 95.1% were employed, 4.9% and the number of unemployed. If the unemployment rate in the economically active population of the country in 2005 was 7.3%, in 2015 - 5.6%, in 2017 - 5.0%, in 2018 it was 4.9%. The number of unemployed decreased by 64.0 thousand people or 25.2% compared to 2005, and by 4.5 thousand people or 1.8% compared to 2010. These indicators show the growing employment in the country. It should be noted that the economically active population is part of the labour force. Individually, the number of economically active population varies over time.

During 2018, 20088 people were given the status of officially unemployed by the employment services, of which 12,608 or 62.8% were men and 7,480 or 37.2% were women. In Azerbaijan, in 2018, compared to previous years, there was a decrease in the number of people who received official unemployment status in employment agencies. Thus, the number of people who received the status of unemployed in 2018 compared to 2017 was 18,393 people or 91.6%, compared to 2015, 8,789 people or 43.8%, compared to 2010, 18,878 people or 94, 0%, and compared to 2005 decreased by 36,255 people or 2.8 times. 59.8% of those receiving unemployment benefits are men and 40.2% are women. During 2018, 119,230 people applied to employment agencies, of which 51,774 were provided with jobs.

Let's look at the distribution of the employed population in the country by type of economic activity through the table below (Table 3).

Table 3 – Distribution of the employed population by types of economic activity

	2005	2010	2015	2017	2018
According to the economy-total	4062,3	4329,1	4671,6	4822,1	4879,3
Agriculture, forestry and fishing	1573,6	1655,0	1698,4	1752,9	1769,3
Mining industry	42,3	41,5	39,1	37,9	40,3
Processing industry	198,4	208,9	229,8	249,1	254,8
Production, distribution and supply of electricity, gas and steam	27,9	30,6	27,1	27,5	27,5
Water supply; waste treatment and processing	23,9	25,2	25,4	30,8	41,1
Construction	211,9	287,5	336,4	347,9	354,5
Trade; repair of vehicles	634,8	626,7	693,7	705,9	706,1
Transport and warehousing	174,6	179,1	197,1	201,0	203,2
Tourist accommodation and catering	25,1	46,9	61,5	73,5	78,2
Information and communication	32,3	55,8	60,3	61,7	62,8
Financial and insurance activities	18,1	24,4	33,0	26,9	27,4
Real estate transactions	82,1	69,6	89,7	88,8	90,8
Professional, scientific and technical activities	43,4	45,6	59,6	73,5	74,3
Provision of administrative and ancillary services	38,7	46,5	55,2	58,0	59,5
Public administration and defense; social security	256,6	279,1	287,3	284,2	281,5
Education	345,1	349,8	373,5	377,8	380,2
Provision of health and social services to the population	188,8	170,3	180,8	189,0	190,0
Activities in the field of relaxation, entertainment and art	52,4	59,6	69,6	80,6	81,5
Provision of services in other areas	92,3	127,0	154,1	155,1	156,3

Data from Table 3, during 2018, the majority of the employed population worked in agriculture, forestry and fisheries. Thus, the number of people working in this field is 36.3% of the total. Then 14.5% of the employed population are engaged in trade and vehicle repair, 7.8% in education, 7.3% in construction, 5.8% in public administration and defence, 5.2% in processing in the industry, 3.9% in the provision of health and social services to the population, and the rest in other areas.

Let's look at the distribution of the types of property of the employed population through the figure below (Figure 1).

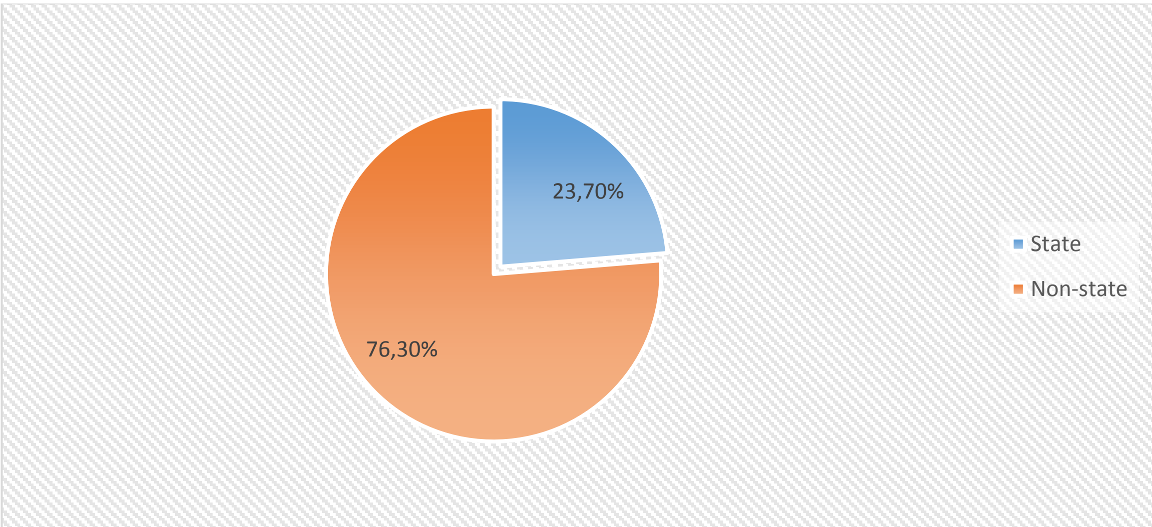

Figure 1. Distribution of the employed population by type of property

During 2018, 1154.9 thousand people or 23.7% of the employed population worked in the public sector, 3724.4 thousand people or 76.3% in the non-oil sector. The economically passive population should also be taken into account in determining the degree of use of labor resources in the economy.

The availability of labour resources does not only ensure the economic efficiency of their use. The efficiency of the economy is largely determined by how interested people are in realizing their potential and how much they can earn from their work. It should be noted that the increase in labour efficiency indicators not only determines the development of the enterprise but also meets the principles of minimization of production costs and therefore serves as a key criterion for the effectiveness of management at all levels."

It is known that production efficiency is of special importance in an innovative economy. The basis of production efficiency is the efficiency of labour resources use. In our opinion, in order to take into account the efficiency of labour resources use and their effectiveness, it is necessary to note such components as the level of education of the employed population, the efficiency of the professional structure of employees, the efficiency of small enterprises and the effectiveness of employment programs.

The processes of formation and management of labor resources are important for the economy. In this case, the main problem is the management of investment in labor resources. The development of a mechanism for managing investments in the development of labor resources increases their employment opportunities, labor efficiency and income. As a result, investing in skills protection and development can be more rewarding.

The quantity and quality of labor resources involved in the formation of innovative development of the country's economy depends on the level of investment in them.

In general, the structure of investments in labor resources is as follows.

1. Investments in education and training, which increase the level of knowledge of specialists, as a result of which increase the volume and quality of labour resources in the workplace.

2. Health- investments in human health.

3. Motivation -investments in the development of labour resources using both tangible and intangible interests.

4. Investments in fundamental scientific developments - form new production technologies and consumption methods, which lead to the formation of labour resources that are carriers of new abilities.

5. Investments in culture and recreation contribute to the development process of labour resources. Harmonious development of a person is impossible without culture and rest. The cultural level of citizens largely determines the economic success of society, socio-political, ideological, educational and moral structure. There are two factors effecting employess job satisfaction and feelings about their jobs. The first one individual featurees like personality, gender, age, marital status and they are originated from the employees him/herself. The other one is external qualities like organization culture, salary, administration and organizational communication and they are originated from work environment (Olcum & Titrek., 2015)

The effectiveness of investments in labor resources manifests itself in identifying priority areas for their formation and development and increasing the efforts of employees to fulfill their obligations.

In general, investments in labour resources occur at both macro and micro levels. At the macro level, it accelerates the country's development by increasing the level of education of the country's population. At the micro-level, enterprises cover the costs of training and retraining of employees, thereby increasing labour intensity, labour productivity, reducing the loss of working time and thus increasing competitiveness. Thus, investing in labour resources is one of the main tools for the development of the economy not only of individual enterprises and organizations but also of the country as a whole.

Increasing funding for education, such as investing in labour resources, should remain one of the government's priorities. One of the main priorities in the development of labour resources in modern conditions is education. Because, as the level of education of the population improves, their income level also increases. The level of socio-economic development of the country depends on the level of education. In education, moral values prevail over material values. Financial resources are the economic basis of education (Alirzayev, 2010).

The main source of economic growth is human capital, which is also based on education. Education becomes the main source of individual labor resources, ensuring its successful adaptation, social mobility and high competitiveness. Education is of great importance for increasing the competitiveness of professionals in the context of modernization of society. Education is a factor in the long-term increase of social labor productivity, production efficiency, better use of labor resources and, as a result, strengthening the socio-economic foundations of society. The growth of gross domestic product is provided primarily on the basis of scientific and technical innovations, which is indirectly the result of the activities of the field of education. The economic, scientific, technical and social development of a society depends on the quality and level of education.

Education will help to meet the challenges facing the country's socio-economic sphere, ensuring national security and strengthening the state institution. The time and money required for education and training can be considered an investment in labour resources. Investing in labour resources is any activity that increases the skills and abilities and thus the productivity of employees. Costs that increase productivity can be considered an investment. Because current expenses can bring income in the future. It is clear that the most important area of investment in labour resources is education.

The second component of the efficient use of labour resources is the professional qualification structure of employees. The process of efficient use of labour resources should ensure the training and retraining of the required number of workers in certain professions and specialities in various sectors of the economy. The organizational development processes and strategic goals of the enterprise are closely related to staff training. The need for professional development and training arises from both external and internal influences. The emergence of new competitors, such as external influences, can lead to changes in the legal framework of the state, the economic situation in the country and the world and internal influences can be the introduction of new equipment in enterprises, changes in production technology.

One of the most important factors of success in modern conditions is the constant development of the skills of their employees. The competitiveness of an enterprise in many cases depends on the qualities of its employees. These quality characteristics are determined by the level of skill, the ability of employees to perform their duties properly and etc. Thus, one of the main tasks of enterprises in relation to employees is to promote the renewal of knowledge and professional development of personnel. One of the main directions of improving the use of staff is to improve working and living conditions, reduce staff turnover by creating a healthy microclimate among employees. Personnel training is not just a tool to solve the individual tasks and problems of the enterprise. It should also be considered as an important source of internal changes. A well-organized training system allows enterprises to gain a competitive advantage in the market and contribute to the development of the national economy. Therefore, enterprises should try to improve the professional skills of employees by developing a system of training. It should be noted that the efficiency of production depends on the qualifications of employees, their placement and use, which affects the volume and growth rate of products, the use of material and technical means.

The third component of labour resources efficiency is the situation of small business. In modern conditions, small business is one of the leading sectors of the economy, which determines the growth rate of the economy, the situation and level of employment, the structure and quality of GDP. Small business development responds to global trends in the formation of a flexible mixed economy, a combination of different forms of ownership and an adequate economic model. Small business and employment issues are closely linked. The impact of small business on employment is that it affects the quantity and quality of the labour market due to its social characteristics. Jobs are being created in small enterprises, which helps to reduce unemployment, as well as increase the intensity of movement between enterprises of different forms of ownership, increase competition for employees, use and protect the labour potential of employees.

These aspects show that small business plays a stabilizing role in the labour market at the national level. Small businesses can perform the function of stabilization in the labour market for several reasons.

First, women's labor is widely used in the jobs created, which will reduce unemployment among them;

Second, small business can provide employment to various socially vulnerable groups, including pensioners, the disabled, and students, who require less competition in the labor market.

Third, job creation in the small business sector can contribute to the balance of supply and demand in the labor market.

Fourth, the creation of additional jobs in small enterprises leads to an increase in total jobs.

Fifth, it leads to the formation of new features of the professional mobility of the labor force in different sectors of the economy, based on different forms of ownership, which can lead to a reduction in unemployment.

Small business is characterized by high interest of each employee. Because the efficiency of the enterprise is directly related to the activities of its individual members. Small businesses can increase the efficiency of the use of labour resources by diverting resources from areas of low productivity and profitability to areas of high productivity and profitability. Small businesses introduce new production technologies, new goods and services to the economy and enter new markets. The development of small business not only creates new jobs, but also activates people's entrepreneurial skills. The implementation of the state program in the field of small business development, as well as the creation of conditions for their cooperation with large enterprises, is of great importance in increasing the use of labour resources. Therefore, the state is interested in developing a small business. Now let's look at the main socio-economic indicators of small businesses operating in Azerbaijan.

Table 4 – The main socio-economic indicators of small enterprises operating in Azerbaijan

	2015	**2016**	**2017**	**2018**
Number of operating enterprises	17847	16835	19535	22689
Number of employees, people	87626	100957	101898	133133
Average monthly salary, manat	302,1	322,2	331,5	354,7
Volume of product (work and service), thousand manats	645016,6	403351,7	559298,6	806180,2

As can be seen from Table 4, the number of employees in small enterprises in 2018 was 133,133, which is 2.7% of the total employed population (133133: 4879300x100%). Compared to 2015, the number of employees in small enterprises increased by 45,626 people or 51.9%, compared to 2016 increased by 32,176 people or 31.9%, and compared to 2017, increased by 31,235 people or 30.7%. The increase in the number of employees can be attributed primarily to the increase in the number of small enterprises. The increase in the number of employees also had a positive effect on the growth of gross output. Thus, in 2018, small enterprises produced products worth 806180.2 thousand manat, which is 161163.6 thousand manat or 25.0% more than in 2015, 402828.5 thousand manat or 2.0 times more than in 2016, 246881.6 thousand manat or 44.1% more than in 2017.

As can be seen, the increase in the number of employees in small businesses has affected the growth of gross domestic product, which ultimately leads to economic growth and reduced dependence on imports in the country. The main reason for this growth is the role of State Programs for the development of small and medium enterprises in our country. In order to ensure sustainable growth in this area, it is necessary to take a number of measures, including additional legal measures to increase employment and lower interest rates on loans. Implementation of these measures will help expand the network of small businesses, which in turn will reduce unemployment. While increasing employment and production efficiency, the state may face the problem of investing more in housing, education, culture, health, science and other social infrastructure areas. Large amounts of financial resources are required to solve these problems. One of such sources of funding is the income of the population. To do this, it is necessary to create financial mechanisms for long-term lending and increase the investment attractiveness of the population savings.

The fourth component of the efficient use of labor resources is the implementation of effective employment programs. As a result of the implementation of such programs, it is possible to create conditions for the formation of a flexible, efficient labor market, to prevent the growth of tensions in the labor market by minimizing the level of total and registered unemployment. Any employment program is effective when it focuses not only on end results, but also on intermediate results. In order to properly evaluate the results of the program, there must be a balance between supply and demand for labor, which depends on indicators such as the level of labor incentives and the dynamics of labor market tensions. The purpose of such programs is providing effective employment. In our opinion, the effectiveness of employment should be assessed not only from the point of view of employees, but also from the point of view of employers and the state and society as a whole. From the employee's point of view, we can attribute the criteria of employment efficiency to the compliance of the work done with the professional level of the employee, the adequacy of the level of wages paid for the work performed to meet the needs of the employee, the compliance of working conditions with safety and ergonomic requirements. From the employer's point of view, the criteria of employment efficiency can be attributed to the compliance of the employee's professional level with the requirements of the work performed, high level of labor productivity, maximum application of employees' labor efforts to production interests and etc. We can include the growth of national income and the production of socially useful products, scientific and technical development, increasing, in the welfare of citizens due to the increase in the level of professionalism, reducing tensions in the labor market as criteria for the effectiveness of employment for the state and society as a whole (Kaznacheeva, & Stroganova, 2011, 98-99).

The effectiveness of implementation of employment programs depends on the state policy in this area. The main priorities of employment policy should be to expand investment activities from all sources, create favorable conditions to increase efficiency, reduce tensions in the field of social and labor relations and eliminate the shortage of jobs while maintaining stability. A system of measures to regulate and organize employment should be developed in accordance with these priorities. The system of measures should include, first of all, the improvement of financial, credit, investment and tax policies, the development and implementation of targeted programs to increase labor force employment aimed at the rational distribution of labor resources, the preservation and development of jobs in the country.

The above-mentioned components play an important role in the formation and development of the country's labor potential. It should be noted that the main purpose of the formation of the country's labor potential is to create conditions for its development in accordance with the requirements of the country's socio-economic development strategy. The most important condition for achieving this is to identify interests and coordinate the actions of key participants in the process.

Thus, we can gradually assess the process of formation and development of labor resources as follows.

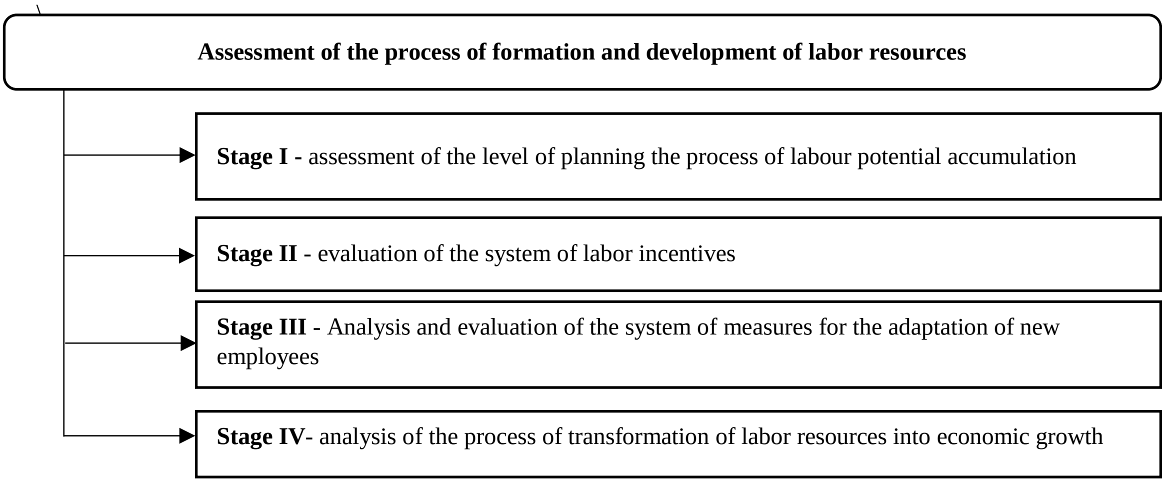

Figure 2. Stages of assessment of the process of formation and development of labor resources

At the stage of assessing the level of planning of the process of accumulation of labor potential of the enterprise, its strategy in the labor market is analyzed and the quantity and quality of demand for labor resources are determined. At the stage of evaluation of the system of labor incentives, the directions of stimulating labor activity aimed at ensuring economic development are analyzed. At the stage of analysis and evaluation of the system of measures for the adaptation of new employees, a system of measures is being developed to collect labor resources and adapt new employees to work in the organization and the labor collective. At this stage, it is important to provide rapid access to the required level of labor productivity. Education and training are a continuation of the process of adaptation of new employees. At the stage of analysis of the process of transformation of labor resources into economic growth, the knowledge and skills acquired and acquired by the employee through education and training become the productive capital of the enterprise, which ultimately ensures economic growth.

Results, Conclusions and Recommendations

In general, the efficient use of labour resources in the country imposes important responsibilities on enterprises. Improving the efficient use of labour resources creates conditions for increasing labour productivity in the enterprise, accumulating resources to increase production, optimizing staff costs and improving the quality of the use of working time in the labour process (Savitskaya, 2014). Let's take into account that it is possible to gain a competitive advantage by increasing the efficiency of the use of labour resources of the enterprise and improving their financial situation. Great attention should be given to the application of incentive models in the use of labour resources. The introduction of a system of incentives leads to an increase in labour productivity and profits, which are important components for improving the financial condition of the enterprise, respectively.

More complete and rational use of labor resources contributes to the improvement of all technical and economic indicators of the enterprise. Efficient use of labor resources is directly related to changes in labor productivity. The main economic category that characterizes the efficiency of the use of labor resources is labor productivity. The increase in this indicator is the most important condition for the development of the country's productive forces and is the main source of growth of national income (Bazylev, & Bazyleva, 2010).

As can be seen, the improvement of the use of labor resources largely depends on the level of organization of social and labor relations. For most countries in the world, the development of social and labor relations takes place under the influence of life principles that create a system of personal responsibility, self-confidence: knowledge, experience, skills, competencies. All this highlights the need to regulate social and labor relations. Regulation of social and labor relations is one of the priority areas of the state's social policy. The regulation of social and labor relations is aimed at obtaining employment and unemployment, fair wages and income, and improving the forms of social partnership. Accordingly, we can show the following main directions of improving labor relations and employment:

1. Creation of new jobs taking into account the activities of employment programs.
2. Increasing the efficiency of employment and improving its structure.
3. Achieving a balance of supply and demand in the labour market by profession and region.
4. Carrying out a balanced migration policy aimed at protecting the domestic labour market.
5. Stimulation of development of self-employment of the population, an increase of business initiative of citizens.
6. Improving the quality of working conditions and safety measures, raising the level of wages and efficient use of working time.
7. Strengthening social protection of the population from unemployment, reducing and minimizing its negative socio-economic consequences.

The mechanisms of social policy for the implementation of social and labor relations at the current stage of development of society are:

- application of social investments;
- to stimulate the active participation of the non-governmental sector in the provision of social services, improving their quality, developing market mechanisms in the social sphere;
- increasing management efficiency and application of modern management technologies to the social environment;
- to develop state-business-public cooperation to solve social problems.

These provisions are the main tasks of the state's social policy. They are aimed at the formation of economic incentives for the subjects of positive labor activity, the normal functioning of the labor market and the development of human capital. It should be noted that the main purpose of state policy in the field of social and labor relations is to take into account the real needs of the economy, more efficient use of labor resources and the formation of human resources.

One of the main directions of the state's social policy in modern conditions is the development of the labour market. The labour market represents the aggregate of the interests of the able-bodied part of the country's population, ie workers and employers. The developing relations in the labour market are different in socio-economic nature. It is known that the most important choice in any person's life is to choose a job. Because a person spends most of his life at work. A person's workplace primarily determines his social status, material well-being and, most importantly, his ability to develop himself. The main participants in the labour market are embodied in the form of state-enterprises-workers. The labour market determines the price and quantity of labour on the basis of supply and demand. In modern times, a flexible and well-functioning labour market is the basis of an innovative economy.

Current trends in the economy and the labour market determine the purpose of the state's social policy to improve this market in the long run. Current trends in the economy and the labour market determine the purpose of the state's social policy to improve this market in the long run. It is necessary to create the necessary legal, economic and institutional conditions for the flexible and successful functioning of the labour market in the country. For achieving these goals, it is necessary to pay attention to the following priority areas:

1. Increase labor market flexibility and stimulate the reduction of illegal employment. This can be achieved in the following ways:

- Improving the legal framework in the field of labor and employment;
- Improving the social protection of the population;
- increasing the efficiency of labor resources use;
- development of social partnership, etc. (Gushchina, 2017, 69).

2. Improving the quality of the workforce by reforming the vocational education system. This can be achieved in the following ways:

- pay attention to the training and development of employees within the enterprise;
- raising the level of qualifications that will allow employees to increase their competitiveness in the labor market;
- increase professional mobility by organizing continuous training and retraining process and so on.

3. Develop labor market institutions and increase employment. This can be achieved in the following ways:

- Improving the quality of employment services;
- development of cooperation with private employment agencies;
- formation of a competitive labor market to serve the unemployed, as well as citizens who have difficulty in finding a job;
- Carrying out reforms in the state employment system to stimulate the active search of unemployed citizens;
- raising the level of awareness of the population about vacancies using modern information opportunities;
- Establishment of a mechanism to inform the able-bodied population about employment opportunities, etc.

4. Improving the working conditions of the working age population. This can be achieved in the following ways:

- effective implementation of measures aimed at i[mproving working conditions and labor protection, reducing the risk of death and injury in the production process;
- effective management of occupational risk through social partnership;
- Improving the assessment system in terms of identifying harmful or dangerous factors affecting the health of the employee in the workplace;
- reduction of harmful and dangerous jobs;
- implementation of measures aimed at creating effective and safe jobs, etc.'

5. Creating conditions for attracting professional labour force from foreign countries. This can be achieved in the following ways:

- stimulating the involvement of foreign workers in certain professions;
- simplification of the rules for issuing visas for foreign citizens with the highest level of professionalism to work in our country;
- Establishment of centres promoting the retraining of foreign personnel, etc.

Thus, the strategic goal of the state's social policy in the labour market is to ensure freely chosen, ensuring productive employment and to create conditions for more efficient use of the labour potential of society in accordance with the professional capabilities of each person. Increasing labour efficiency must be accompanied by a reduction in excessive employment in production and a division of labour in alternative areas of activity.

Therefore, improving the efficiency of the use of labor resources in the context of increasing demands on the quality and innovation of human capital should always be the focus of social policy of the state. The problem of employment plays an important role in the efficient use of labor resources. Employment is in harmony with labor resources. Without a quantitative assessment of the main features of effective employment, it is impossible to develop practical recommendations aimed at increasing the efficiency of the use of labor resources in the economic system. It is necessary to thoroughly analyze the situation of all existing economic entities in the country and on this basis to determine the opportunities for efficient use of labor resources, as well as to assess their performance by identifying the shortcomings and development trends of individual sectors in order to solve the employment problem. At the same time, regional aspects of the labor force must be taken into account.

Several factors can hinder the effective development and operation of the labor force. These factors may include the instability of the economic system, the mismatch between supply and demand and etc. for skilled labor and certain specialties. Therefore, by expanding public-private partnership, the need for certain specialists should be identified and special programs should be developed in this regard. If these measures are implemented, the development and use of labor resources will improve. All this makes it an objective necessity to optimize the process of formation of labor resources. Ways for optimizng the process of labor force formation should be based on the following:

- Ensuring the general demand for labor of entrepreneurs using the large labor force available in the labor market;
- Increased investment in financing new job creation programs;
- Identification of alternative sources of funding for public employment programs;
- Improving the strategy of increasing employment by expanding the requirements of the employer.

Thus, the efficient use of labor resources is an important condition for the formation of an innovative society. The most important mechanism for ensuring the development of the labor force is not the creation of minimum social standards and norms that ensure the living standards of the population, but an effective innovative social policy of the state, which leads to higher labor productivity and greater opportunities for consumption.

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Actual Problems of Business-oriented Education in Ensuring Sustainable Economic Development

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Abstract
In the context of the global financial crisis in the world economy, specialization in international markets is strengthening, and a science-based economy model based on innovation and creating high added value is preferred. This leads to a sharp increase in competition at the global and regional levels. In such a situation, each country must face such tasks as the formation of sustainable economic development with high competitiveness, productivity and efficiency. These tasks include improving the structure of the economy, the formation of science-intensive economy, maintaining macroeconomic stability, further improving the investment climate, applying advanced technologies and practices, developing human capital, and promoting foreign investment. At present, the problem of ensuring sustainable development is very relevant, and it is not only due to the situation caused by the global economic crisis. Even in conditions of economic stability, the issues of sustainable development of the country, including business, are very important. Sustainable development is the key factor for improving the stable operation of a business. Global processes taking place in the world in modern conditions, the emergence of a seriously competitive environment emphasize the need to ensure the sustainable development of business, its adaptation to changing market requirements. In solving all these serious problems, there is a special need to constantly pay attention to the organization of business in terms of modern requirements, to increase their production capacity and capabilities. World experience shows that one of the ways to achieve these goals is to ensure sustainable business development. The solution to this problem also depends on investment. Purposeful reforms are set as an important task in the direction of implementation of investment policy to ensure the sustainable development of business. All these features show the relevance of the topic of the article. In the article, the need to ensure sustainable business development was substantiated and the main directions were explored. Means to ensure sustainable development have been explored. The role of investment as one of the tools to ensure sustainable business development has been explored. The impact of investment on sustainable business development was considered. The problems of formation and implementation of effective investment policy in order to ensure competitiveness and sustainable development in this area have been investigated. The expediency of taking several effective measures to ensure the investment attractiveness of business is substantiated. At the end of the article, a number of suggestions for a recommendatory nature were made. All economic entities can take advantage of suggestions for a recommendatory nature. The article is mainly based on grouping, comparison, growth dynamics and factor analysis methods.
Key words: Education, sustainable development, investment, human capital.

Introduction
Achieving sustainable socio-economic development is one of the most important challenges facing all countries of the world. The goal is to ensure economic growth, taking into account the interests of future generations, while protecting the resource base and the environment. Sustainable business development can be the main source of economic growth. The current stage of economic development is accompanied by processes such as integration, globalization, increased competition, depletion of natural resources. Therefore, the creation of an effective mechanism for the sustainable development of business should be the main task not only of economic entities, but also of the state as a whole.

Business activity helps to solve many social, scientific, technical and economic problems of the country. The modern direction of development of the country's economy and the strengthening of international competition determine the need to improve the system of sustainable development of business. The problem of business management is one of the actual problems of our time. In times of crisis, business instability is formed and preparation of measures are required to study its situation and ensure its development. In modern conditions, global processes taking place in the world, the acceleration of economic development, the emergence of a seriously competitive environment emphasizes the continuous improvement of business activities, the activities of production areas, adaptation to changing market requirements. In solving all these serious problems, there is a special need to constantly pay attention to the organization of business activities in terms of modern requirements, to increase their production capacity and capabilities. The main purpose of creating business activity is to develop entrepreneurship, create an abundance of products through by providing goods and services, eliminate industry and territorial monopolies, widely apply scientific and technological progress in production, expand foreign economic relations.

World experience shows that without a free market economy, independent producer, educational business activity, the welfare of society is impossible. The formation of market structures in all sectors of the country's economy responds to global economic trends of economic processes. Because in every country of the world, market structures operate in different types of small enterprises. Business activity is the most important element of a market economy and mainly contributes to the intensive development of the state, which largely determines the rate of economic growth, the structure and quality of the gross national product. Thus, business activity is one of the most important components of the modern economy. Due to its economic nature, it is closely related to the market economy and is its product.

For increasing the efficiency of the business, several economic, technical, organizational and social measures have been implemented in our country, and scientifically substantiated proposals and recommendations have been made. Efficiency should be assessed not only as an economic outcome but also as a social outcome. This necessity is due to the fact that in areas where efficiency is high, the net profit, or the increase in profits, creates real conditions for solving social problems. As a result, the socio-economic efficiency of production as a whole is ensured. In general, production efficiency is a complex socio-economic process as a major problem of business activity. Substantiating the role of investment is an important task, as one of the directions of a correct understanding of this process and its promotion. Because this is the main tool for ensuring sustainable business development.

The necessity to ensure sustainable business development

The need for in-depth study of the problem of ensuring sustainable economic development comes from a number of sources. The globalization of the economy and the global financial crisis make it necessary to conduct and expand research on sustainable economic development. The problem of sustainable economic development can be considered with reference to different continents of the world, regions, countries, territories, sectors of the economy, settlements, individual economic entities. Ensuring sustainable business development in modern times is one of the important factors in the country's economic growth, accelerating technological and socio-economic development, ensuring economic security and competitiveness in the world market.

Sustainable business development is determined by the effectiveness of socio-economic indicators, management methods, forms and mechanisms. An objectively chosen strategy for managing business processes is especially important for sustainable development. Because the level of socio-economic life of the population effectively depends on ensuring food security of the country, increasing the budget and creating conditions for large-scale production. The application of innovative adaptive management systems, first of all, provides updating of methods and approaches in the management process, change of technological processes of production and transition to more efficient use of all types of resources.

It is necessary to identify methods of continuous monitoring of activities for effective and sustainable development of business activities. This process involves the collection of data that tracks the dynamics of changes in the state of the enterprise and determines its development trends. The following conditions must fulfill to ensure the sustainable development of the business: organization of planning for data collection, processing and analysis; use of a strong technical base; involvement of highly qualified personnel; ensuring financial security. Management of sustainable business development is based on the formation of management principles, goals, functions and management methods, as well as the placament of the object and the subject of management. All of the above elements that govern business development are identified in the context of sustainable development to ensure social stability, environmental balance and economic efficiency. Not only the nature of the factors, but also an effective mechanism that ensures the sustainable development of the business is important for effective operation. The business development management mechanism allows for the gradual development of competent management decisions in the field of sustainable development.

The process of managing business development is divided into a number of types, including economic, social, financial, environmental, investment, and innovation. The interrelationship of all types of business sustainability is the overall sustainability. At present, competition in the market is intensifying, accordingly, economic entities must constantly monitor dynamic changes and apply appropriate practical management methods by initiating the increase of competitiveness (Shilova, 2015). At the current stage of economic development, the problem of competitiveness occupies a key place in the economic policy of the state.

Competitiveness is one of the important factors in ensuring sustainable business development. In addition, it is necessary to increase the cost of human development, create high-tech production, search for ways to reduce production costs, create environmentally friendly technology, create guiding and organizational conditions for the application of new equipment and production technologies in the production process in order to increase the competitiveness of the business. Only with long-term, sustainable and progressive development of all components of competitiveness can be ensured with a stable development of the competitiveness of the enterprise. Thus, the competitiveness of business is an indicator of effective economic policy and its real, profitable implementation in a competitive environment (Tkachenko, 2012). Management of business activity on the basis of the analysis of competitiveness and competitiveness of its products is a very important problem in ensuring the sustainability of socio-economic development of the national economy.

Evaluation is the starting point for the development of measures to increase the competitiveness of the business, and at the same time is a criterion of the effectiveness of these measures. In addition, the assessment of competitiveness is the methodological basis for the analysis and, as a result, identifies ways to increase the competitiveness of the business. Assessing the competitiveness of a business is necessary for the following purposes:

1. Development of measures to increase competitiveness;
2. Selection of counterparties for joint action;
3. Organization of measures for efficient use of enterprise resources;
4. Search ways for the company to enter new sales markets.
5. Production of new types of products and services.
6. Implementation of investment activities;

There are several ways to increase the competitiveness of your business:

1. Sustainable use of innovations.
2. Search for new, more advanced forms of manufactured goods.
3. Production of such products that will meet national and international standards.
4. Sale of goods in market segments with the highest quality and service requirements. Use only high quality raw materials.
5. Increasing the material interests of employees and improving working conditions.
6. Conduct market research to determine customer needs.
7. Analyze competitors, identify strengths and weaknesses.
8. Investing in research aimed at improving product quality.

Using these methods, businesses will be able to strengthen both competitiveness and financial stability.

Product sales, quality increase and cost reduction must be ensured in order to increase the competitiveness of business activities. Note that only the increase in sales will not lead to the desired results. Because, the expenses of the enterprise do not take into account important indicators such as its profit and etc. When organizing the production process and if we plan the volumes in accordance with this method, it is necessary to solve a number of problems that determine the sales volume of the product, which will ensure uninterrupted production activity. Another direction is to improve the quality of products, which will significantly affect the development of new markets, increase exports and so on. The solution to the quality problem will be the basis for raising the image of the enterprise among customers, entering foreign markets and maximizing profits. The competitiveness of a business depends not only on the quality and price parameters of its products, but also on the level of management, management of existing financial flows, investment and innovation activities.

The competitiveness of business activity is determined by the complex influence of external and internal factors. Environmental factors directly or indirectly affect economic and financial activities: they operate outside enterprises. Therefore, for ensuring the sustainability of their activities, businesses must immediately respond to changes in the external environment and make effective decisions. The competitiveness of products is also one of the important factors in ensuring the sustainable development of business. Only with long-term, sustainable and progressive development of all components of competitiveness can be ensured with a stable development of the competitiveness of the enterprise. The competitiveness of a business is largely determined by its ability to use its resource potential effectively. The degree of efficiency in the use of resources is determined in proportion to the level of development of the productive forces obtained as a result of social, production and other relations, as well as the efficiency of the use of resources by competitors (Shilova, 2015). There should be a normative and technical basis for the creation of a holistic management system for the efficient use of resources. As one of the organizational and economic ways to improve the competitiveness of the business, market-oriented methodological approaches can be applied. These methodological provisions can serve to improve marketing elements that help increase business sustainability. Note that segmentation best meets the needs of consumer groups. Therefore, as a result of changes in the competitive environment, segmentation work should be carried out regularly.

A strategic plan plays an important role in managing business development and increasing competitiveness. A holistic approach to managing business development requires trequires the development and implementation of an integrated business strategy that provides a system of interaction aimed at increasing the competitiveness of products, strengthening the market position of the enterprise and ensuring its economic sustainability. Competitiveness enhancement strategy can determine the prospects of business activity in the future. If goals determine the quantitative and qualitative parameters of an enterprise's successful competitive advantage, the strategy is built on the means and methods to achieve these goals in a changing competitive environment.

It should be noted that evaluating the effectiveness of competitive strategies and controls - their implementation, the goals of the enterprise and the process of achieving them is the final stage of strategic management. Therefore, for the socio-economic development of business, it is necessary to form an effective competitive strategy, create and strengthen competitive positions in the market (Fathutdinov, 2014). In general, the sustainable development of business competitiveness can be ensured only on the condition of long-term, sustainable and progressive improvement of all its components. This is considered to be the most important factor influencing the sustainable development of business in the country. Making and implementing strategic management decisions is a key stage in the sustainable development of a business. Management involves analyzing and evaluating the effectiveness of strategies, identifying the problem of the quality of sustainable business development, measuring the predicted synergistic effects, and identifying mechanisms for their implementation. The investment decision-making mechanism is mainly determined by the priorities of strategic business development and appropriate financial support. Effective management is the most important tool for renewing the economy and increasing business investment activity. Improving management methods is the key to sustainable business development. The driving force in the sustainable development of business is competitiveness and investment attractiveness, which in turn are important objects of strategic management.

Findings

At the current stage of development of business forms in Azerbaijan, the main tasks facing them are to increase labor productivity in this area, such as increasing labor productivity, reducing labor and capital costs per unit of output, efficient use of labor resources, raising the level of specialization of personnel, loss prevention, improving the quality of products and services provided, production of products in accordance with the needs and competition of the domestic market, export of high quality and standard products to foreign markets. For solving these issues, it is worth noting the investment that plays an important role in ensuring the sustainable development of the business.

Business investment activity mainly determines economic growth, expands production potential and prospects for the development of the national economy. As a result of investment, production volumes and enterprise revenues increase. This income is partially re-collected and then re-invested. Ideally, this process is continuous, ie income is collected and re-directed to production. As a result of efficient distribution of investments, the development of expanded production is ensured. The more efficient the investment, the higher the income growth, the more it is possible to reinvest in production.

All types of measures for the implementation of effective investment projects can be included in the investment activities of the business. The implementation of investment projects can bring income to the enterprise and affect its future activities (Knyazeva, Yuzvovich, & Degtyareva, 2016, 279). Business investment activity manifests itself at both macro and micro levels. The role of business investment activity at these levels can be seen more clearly in the table below.

***Table 1* –** The role of business investment activity at the micro and macro levels

Effects at the macro level	Effects at the micro level
Expansion and renewal of fixed assets of industry and non-manufacturing sector	Expanding the scope of business
Acceleration of scientific and technical progress, intensification of innovative activities in the economy	Prevention of excessive moral and physical depreciation of fixed assets of the enterprise
Improving the quality of local products and ensuring competitiveness	Renewal and expansion of material and technical base of the enterprise
Balanced development of all industries and regions	Improving the technical and technological level of production based on the application of new equipment and technologies
Ensuring positive structural changes in the economy	Ensuring and expanding competitiveness in both domestic and world markets by improving the quality of products.
Formation of the necessary raw material base	Reducing the cost of production and sales
Increasing the economic, innovative, technological and human potential of the country	Organizing and strengthening control over key decision-making in the enterprise
Expansion and optimization of the industrial structure of exports	Purchase of securities and investment in the assets of other enterprises
Increasing the competitiveness of the national economy	Ensuring and expanding the competitiveness of the enterprise
Improving the living standards and welfare of the population, providing employment	Organization of efficient use of labor resources

Investment factors for the development of business in modern society play an important role in the economic activity of each business entity and the country as a whole. Information about the economic processes taking place in the enterprise and its environment allows its managers to manage the current market situation. Based on the information received, business leaders make management decisions. These decisions can be focused on pricing policy, domestic recruitment policy, selection of the volume and quality of products or services, and, most importantly, the formation of an effective development strategy. That is, each entrepreneur first makes investment decisions aimed at increasing the capital and market value of the enterprise.

An entrepreneur can invest both in his own enterprise and in another enterprise by purchasing securities. Information about the current economic situation allows the investor to choose the enterprise from which he expects the greatest return on investment. The return on investment depends on many factors that collectively affect the economic environment and therefore the enterprises in that environment.

It is necessary to have investment activity and investment culture for a high level of organization of investment activity. The investment culture of business, being part of the corporate culture, covers a number of aspects of doing business, including maximizing the efficiency of invested capital, the application of legal, honest approaches and methods to solve investment management problems.

In order to ensure the sustainable development of business in Azerbaijan, during the formation and implementation of effective investment policy, first of all, it is necessary to implement the right socio-economic policy to identify the factors that hinder investment activities and eliminate the negative effects of these factors. In this case, it is expedient to review international experience and develop a state policy accordingly. It is known that the state takes into account the demand and supply of this factor when developing investment policy. The demand for investment is determined by the level of development of the economy and its individual sectors, the level of realization of the production of competitive products, the access of these products to foreign markets and other factors. One such type of factors is global. Based on this group of factors, the effects of international processes, geographical changes and natural phenomena are collected, which also indirectly affect the demand for investment. Political conflicts (mainly wars, conflicts between countries, etc.), economic crises (rising and falling prices of various resources in the world market), natural disasters, and geographical changes are some of these factors. The investment proposal is determined by the current state of the business environment, the level of profitability and purchasing power of the population, the degree of impact of risks that may arise during investment, attitudes towards domestic and foreign investors, the level of development of financial markets and infrastructure and other factors.

Business investment policy is a complex, interconnected and interactive type of interaction aimed at long-term development, profits and other positive effects resulting from investments. Thus, the main goal of investment policy is to create conditions for sustainable business development (Shakaraliyev, & Shakaraliyev, 2016). Investment policy, which is an integral part of the overall economic strategy of a business, must be consistent with its main goals and objectives. In turn, the successful implementation of the main directions of investment policy, as a whole, helps to strengthen the economic position of business, achieve better results in financial and economic activities and increase the efficiency of operations in a market economy. In general, the formation and implementation of a common economic policy, and especially investment policy are important in the work of any enterprise. Business investment policy should ensure the following:

- to achieve the strategic goals of business development and financial stability;
- efficient use of its resources based on the conditions of economic activity and the size of the enterprise.

Business investment policy must be able to respond quickly to changes in the internal and external environment. Changes in business investment policy can be made in the following cases:

- changes in the legislation on investment activities in the country's legislation;
- changes in the field of evaluating the effectiveness of investment policy;
- significant change in business conditions.

Changes in investment policy must be justified and formalized by compiling relevant documents. The main objectives of business investment policy should be aimed at achieving a certain economic, social or other effect and allow the company to strengthen its image and position in a competitive environment. We can include the following in the main directions of business investment policy:

- formation of optimal structure of sources of investment financing;
- formation of the optimal structure of the investment portfolio;
- increase the efficiency of production capacity use;
- efficient use of available investment sources;
- increasing the competitiveness of products;
- strengthening the financial stability of the business.

Investment policy contributes to the implementation of business functions such as management, coordination, control, regulation and etc. For the successful implementation of the functions, it is necessary to ensure that the investment policy is linked to the overall business development strategy. Business development must be subject to a single strategy, so all aspects of investment process management must be linked to it. This is the main condition for the implementation of the functions of investment policy in practice (Statistical Indicators of Azerbaijan, 2019) .

It is known that the sustainable development of business depends largely on the level of implementation of incentive policies by the state. Stimulus government policy is needed when market regulation cannot be carried out freely, or there are gaps in the market in terms of stimulus tools. This leads to higher costs, lower revenues and a lack of market information. This shows that market self-regulation is not socially efficient. Therefore, the state is forced to use means of stimulating effect. One such stimulus is related to investment activities. In this regard, the development and implementation of stimulating investment policy of the state is one of the important tasks. It should be noted that the stimulation of investment activity, the identification of its existing opportunities and directions for its improvement are distinguished by their scientific and practical relevance. Additionally, it should be noted that any investment in the development of the national economy does not play a positive role. When making decisions about investing in the national economy, first of all, it is necessary to correctly determine which industry or product will be more profitable in the development of the economy. Small and medium businesses can be effective in this regard. The following requirements are set for the state investment stimulation policy:

- all factors hindering the country's investment activity must be properly identified, and targeted state policy must be implemented to eliminate their negative effects;
- the work of state economic regulatory institutions must be established in an efficient and quality manner in order to move to an investment model of economic growth and achieve success in reforms;
- the state's policy to stimulate investment should occur along with the process of improving the institutions of economic regulation, and they should complement each other;
- a favorable investment climate must be created in the country that can ensure economic growth.

It is necessary to increase the role of the regulatory function of taxes in the state regulation of the economy, such as strengthening the mechanisms that stimulate investment activity. The solution to this problem is directly related to the improvement of tools aimed at reducing tax evasion. Tax incentives are also applied in Azerbaijan to stimulate investment activity.

Innovation is an equally important factor in increasing investment attractiveness. It should be noted that the task of implementing innovations plays a leading role in the system of all factors that determine the attractiveness of investment. Innovation is one of the most important means of ensuring sustainable business development in both the short and long term. Various types of innovations that increase the competitiveness and demand of products have a direct or indirect positive impact on production and sales, production and sales costs, prices, quality indicators. At the end of these changes, the profit and profitability of the enterprise is ensured. Production growth can be ensured by innovations in production technology, production capacity, organization and maintenance of production. An increase in production leads to an increase in sales and, as a result, sales revenue. In addition, innovations provide an increase in revenue and product profitability by saving on fixed costs, as well as a reduction in overall production costs, which allows prices to be reduced by reducing unit costs.

At this stage, the world economic community considers the use of innovation-oriented investments a priority for the sustainable development of the national economy and business in general. The active development of the global economy cannot be imagined without the emergence of advanced technologies, new markets, knowledge and the application and development of human capital. Innovations provide a competitive advantage for any level of sustainable development (Shokhin, 2011).

One of the main ways to solve economic, social and environmental problems in modern competitive environment is to use the latest achievements of science and technology. Every enterprise strives for intensive economic growth, ie the use of more advanced factors of production and technology. A prerequisite for strong growth is the innovation strategy applied in the enterprise. It is also important to note that most of the discoveries and advances in high technology have been made through investment. The following figure shows the factors that affect the investment attractiveness of the business.

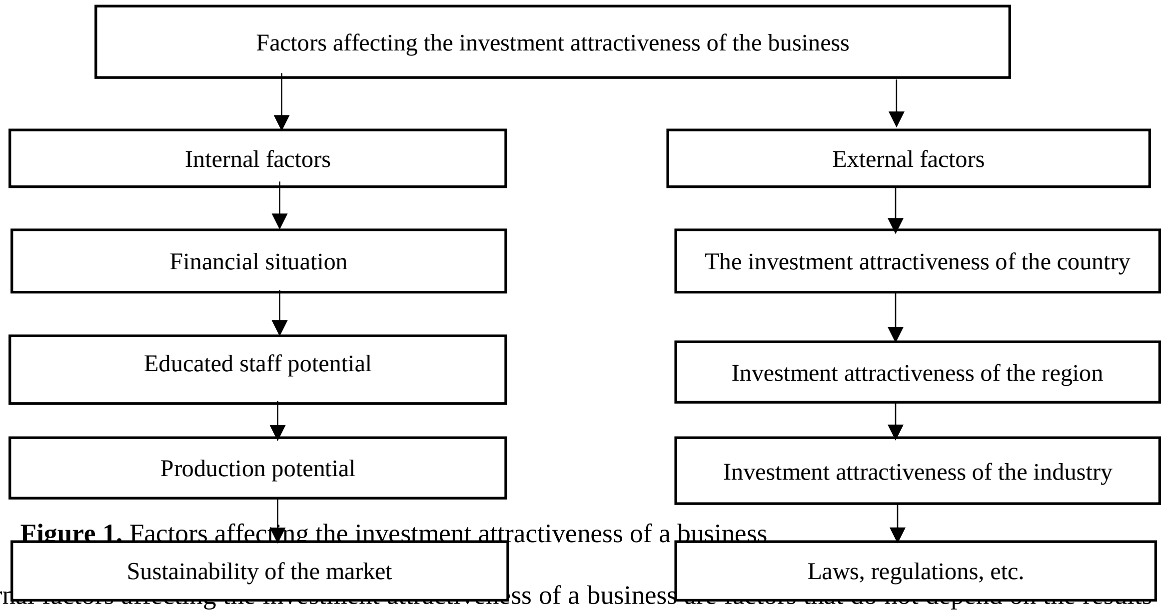

Figure 1. Factors affecting the investment attractiveness of a business

External factors affecting the investment attractiveness of a business are factors that do not depend on the results of economic activity of the enterprise. Internal factors include factors that directly depend on the results of the enterprise's economic activities. When analyzing and assessing the investment attractiveness of a business, it is necessary to take into account its level of development as a whole and, in some cases, the level of development of the national economy as an important external factor (Peshkova, & Kazakov, 2009).
The investment attractiveness of a business is determined by the availability of investment potential. When assessing the investment attractiveness of a business, it is necessary to take into account the availability of opportunities that on the one hand, the company has the ability to generate income, on the other hand, to reduce the risks of financial investors. Thus, a comprehensive impact on reducing business risks (to ensure financial stability) and increasing revenues will increase the investment attractiveness of the enterprise. Assessing investment attractiveness is important not only for investors and business leaders, but also for different parties who will be interested in different aspects of investment attractiveness. Enterprise managers use factors which are determining financial stability to develop the most effective management decisions that increase investment attractiveness. Because the financial stability of the business is an important factor in assessing the attractiveness

of investment. Determining the financial stability of economic entities operating as an object of investment is one of the important problems in the analysis of investment attractiveness. Because, insufficient financial stability can lead to the bankruptcy of the enterprise and the lack of funds for the development of production.

In general, in order to assess the investment attractiveness of a business, all indicators that determine its financial condition, market position, development dynamics, management level, staff qualifications are analyzed. First, groups of factors affecting investment attractiveness are identified, and then these groups are ranked according to their importance as a result of expert assessments (Mironov, 2016).

Taking into account the importance of assessing business performance in Azerbaijan in a market economy, the development and practical application of various methods of such assessment, as well as the development of small and medium-sized businesses on the basis of the latest effective recommendations to improve economic performance is especially actual today. The development of business in Azerbaijan is primarily conditioned by its financial security. As the world experience shows, obtaining the necessary capital for the formation and development of small and medium-sized businesses has always been an urgent problem.

The analysis of the main macroeconomic indicators related to the financing of business activities in Azerbaijan can be carried out through the following table. The analysis period mainly covers 2015-2018 (Alibeyov, 2011)

Table 2 – The main macroeconomic indicators of business entities

	2015	2016	**2017**	**2018**
Created value added, million manat	1987,8	3587,2	3807,6	9836,6
Average annual number of employees, thousand people	87,6	281,0	290,1	283,4
Average monthly nominal salary, manat	302,1	338,6	352,8	445,3
Fixed capital investments, million manat	807,2	2830,2	3298,6	6953,0
Production, million manats	5986,3	5831,2	6269,6	17401,6

The data in Table 1 show that the value added created by business entities in 2018 amounted to 9836.6 million manat, which compared to 2017, 6029,0 million manat or 2.6 times, compared to 2016, 6249.4 million manat or 2.7 times, 7848.4 million manat or 4.9 times more. In 2018, the average monthly salary increased by 92.5 manat or 26.2% compared to 2017, compared to 2016 increased by 106.7 manat or 31.5%, and compared to 2015 increased by 143.2 manat or 47.4%. In 2018, investments in fixed assets increased by 3654.4 million manat or 2.2 times compared to 2017, compared to 2016 increased by 4122.8 million manat or 2.5 times, and compared to 2015 increased by 6145.2 million manat or 8.6 times. Production output in 2018 increased by 11132.0 million manat or 2.8 times compared to 2017, compared to 2016 increased by 11570.4 million manat or 3.0 times, and compared to 2015 increased by 11415.3 million manat or 3.0 times.

Let's look at the value of funds invested in fixed assets by businesses through the table below (Alibeyov, 2011)

Table 3 – The value of funds invested in fixed assets by business entities

Types of economic activity	**2015**		**2018**	
	As a result, in%	**Cost, thousand manats**	**As a result, in%**	**Cost, thousand manats**
Total by type of economic activity	100,0	8796458,5	100,0	6952966,2
Agriculture, forestry and fishing	4,0	354917,9	9,7	673502,4
Industry	55,7	4903380,4	12,9	895378,2
Construction	15,6	1373081,9	36,2	2515497,5
Trade; repair of vehicles	2,4	212334,1	3,8	263243,0
Transport and warehousing	3,0	258830,6	21,2	1470780,2
Tourist accommodation and catering	2,4	209067,7	2,2	153029,5
Information and communication	2,2	194589,2	4,6	318675,9
Real estate transactions	0,1	10212,5	0,1	7495,4

Education	2,6	229946,1	4,7	330820,8
Provision of health and social services to the population	2,2	192457,1	2,2	154633,7
Provision of services in other areas	9,8	857641,0	2,4	169909,6

Source: State Statistics Committee of the Republic of Azerbaijan. Baku, 2019.

As can be seen from the data in Table 3, the value of funds directed to fixed capital by business entities in 2018 amounted to 6952966.2 thousand manat, which decreased by 4008002.2 thousand manat or 21.0% compared to 2015. More growth was observed in agriculture, forestry and fisheries, construction, transport and warehousing. However, more decline was observed in the industrial sector. Thus, the value of funds directed to fixed capital by business entities in 2018 decreased by 1142415.6 thousand manat or 5.5 times compared to 2015. The value of funds directed to education increased by 100874.7 thousand manat or 43.9%.

It should be noted that the Strategic Road Map for the national economy in the Republic of Azerbaijan has launched the process of forming a more economically and socially efficient higher education system in our country. There is no special Strategic Roadmap for the development of education. This is explained by the fact that the Strategic Roadmap for the National Economic Perspective identifies the “Human Capital Development” goals (Strategic Goal 3) as one of the main strategic goals, and as an integral part of it, the “Improving Quality at All Levels of Education” economic has been identified as an important development priority (Priority 3.1). It is shown here: “Measures for the development of human capital have been identified and implemented over the past years and are reflected in a number of strategies, government programs and concepts currently being implemented. The development of human capital, development based on knowledge and innovations in the "State Strategy for the Development of Education in the Republic of Azerbaijan" are priority. Also, the laws of the Republic of Azerbaijan "On Education" and "On Science" are important state documents that serve the development of human capital in the country. "
Many measures of the state's investment policy are aimed at increasing the investment potential of business. The above gives grounds to say that the investment policy of the state is one of the important directions in creating favorable economic conditions for investment activities (Mammadov, 2016) .

Today, attracting investment to the business is one of the main tasks to increase its efficiency. The solution to this problem is to create and provide the necessary conditions for potential investors.

Increasing the investment activity of business requires the solution of a number of interrelated tasks. First of all, it is necessary to strengthen the investment potential of enterprises by increasing economic efficiency. It is also necessary to develop new approaches to depreciation policy and reduce the tax burden on enterprises. Improving the efficiency of business and strengthening its investment potential may be the result of the mobilization of domestic resources and the use of methods of state regulation in accordance with the existing socio-economic conditions. The investment potential of a business is a type of investment policy that determines the amount, structure and dynamics of funds raised (Pirogov, Temnova, & Guskova, 2012).

Increasing the investment activity of a business is possible primarily under the influence of its internal environmental factors. We can show these factors as follows. Increasing the investment activity of business requires the solution of a number of interrelated tasks. First of all, it is necessary to strengthen investment potential by increasing economic efficiency. It is also necessary to develop new approaches to depreciation policy and reduce the tax burden on enterprises. Improving the efficiency of business and strengthening its investment potential may be the result of the mobilization of domestic resources and the use of methods of state regulation in accordance with the existing socio-economic conditions. In the dynamics of tariffs for the services of natural monopolies, it is necessary to strengthen state control, reduce the debt burden through their long-term restructuring, and ensure maximum transparency of financial flows through the transition to an international accounting system.

The following table shows the internal factors influencing the increase of investment activity of the business (Table 4).

Table 4 – Internal factors that increase the investment activity of the business

Factors	**Directions of impact**
Finance	Development of the use of basic and circulating products Improving the financial condition of the economy (increasing liquidity, financial stability and growth capacity) Profit management design Credit debts management
Economic	Improving the quality of sales activities Price management Carrying out price monitoring for raw materials and supplies Improving production efficiency using environmentally friendly technologies Quality management
Personnel	Increasing the level of education of the enterprise's labor resources
Information	Development and application of advanced information systems Ensuring access to internal information Establishment of external data exchange channels

Measures are also considered a priority in the direction of finding an effective owner. In the event of an increase in the capitalization of firms, it is necessary to train specialized personnel, including option rights for the acquisition of shares, to shift to the basis of the effectiveness of the results of their activities in the remuneration of top managers.

Creating a favorable tax environment to increase the attractiveness of investment in small and medium-sized businesses is one of the priorities of tax policy in the country. The tax system is an important participant in creating a competitive business environment in the country. Today, the tax system not only performs fiscal functions. Also, the tax system is important to increase the attractiveness of investments in business activities as one of the key parts of the mechanism to stimulate economic growth (Drobotova, 2018).

One of the ways to increase the investment activity of business is the introduction of tax incentives. The main taxes that can be used to increase the investment activity of the business are property tax, VAT, simplified tax. If a well-developed system of tax incentives is used effectively, it will lead to increased investment activity, expansion of production, scientific and technological progress, and the development of small and medium-sized businesses. The use of tax benefits allows you to solve social problems. All this shows the importance of implementing reforms related to the investment attractiveness of business.

The complexity of tax reform is explained by the fact that, on the one hand, it is necessary to reduce the tax burden in order to increase investment activity in the real sector of the economy. On the other hand, in its reduction, the erosion of current budget revenues and the increase of social tensions are inevitable. One of the possible options under these conditions is to shift the tax burden from the sphere of material production to the sphere of demand. It should be noted that tax incentives are one of the most important methods of tax regulation of investment activities.

Improving the investment attractiveness of business is not possible without improving tax policy [3]. In order to provide simpler tax services to entrepreneurs in Azerbaijan, a "single window" system has been formed for a simplified tax system. Thus, both the registration of the taxpayer and the tax payment mechanism have been greatly simplified. The number of inspections of taxpayers by the relevant authorities has been reduced. Interference that hinders the development of entrepreneurship has been prevented. This has increased the ability of foreign investors to invest in business (Karimova, 2008).

One of the ways to increase the investment activity of business is to stimulate the workforce. The problem of promoting and stimulating the work of employees of enterprises of any form of ownership has always been relevant. Stimulation of labor can be defined as the internal motivation of a person to engage in a particular labor behavior to achieve the goals of both the organization and the employee.

One of the most important and priority areas where investors spend money is industrial safety and employee health. Creating a good work environment in the enterprise, as well as ensuring a high level of safety procedures, ensures that the employee feels more confident, and thus the employee can be fully concentrated to perform their functions and professional duties. This, in turn, helps increase productivity and increases the organization's profits.

One of the managerial features of human resources in business is teamwork, and along with improving the performance of individual work, helps to organize effective interactions between employees.

Thus, the features of strengthening and stimulating labor in business are the use of different types of labor incentive complexes based on an individual approach, with a special focus on material and non-monetary incentives for each employee, which determines the priority of high wages and moral incentives among employees (Abbasov & others., 2011).

It should be noted that the economic mechanism for attracting investment by businesses includes measures to increase and use funds raised from domestic and foreign sources to invest in economic entities, various activities and facilities.

Thus, we consider it important to increase the interest of investors in investment activities, to provide them with certain incentives to engage in these activities. Favorable conditions must be created in the country for the products of local producers. The market should be protected from cheap foreign products, and certain concessions should be made to local entrepreneurs. Once the situation gradually improves, such concessions can be eliminated.

Results, Conclusions and Recommendations

The state should make efforts to use modern methods of economic regulation in order to develop the business and increase its role in the market economy system. Thus, there is a need for government regulation of economic goals, objectives and management principles of business. When regulating business activity, the optimal option of trade and economic relations with near and far abroad should be chosen, and these principles should be reflected in the strategy of sustainable socio-economic development taking into account the specific features of the national economy, the requirements of the international division of labor. Innovation, accepted as a powerful strategic management instrument, is an important factor for businesses to providing a competitive advantages. The businesses in a competitive environment formulate an innovation strategy in line with their expectations regarding to innovation (Abdulla, & Emine, 2016). As can be seen, the success of sustainable business development largely depends on the existence of the necessary economic environment and, above all, healthy competition. Sustainable business development creates conditions for providing the market with a wider range of goods and services, expanding healthy competition, applying the achievements of scientific and technological progress, and increasing export opportunities. Attracting investment in this area will lead to achieving economic efficiency. Therefore, we consider it expedient to take the following measures for ensuring business investment activity:

- Mixed and direct budget financing of investment projects that are expected to yield significant results in business;

- lending of investment projects from the budget;
- expansion of public-private investment cooperation for business development;
- use of tax incentives practice that stimulates investment activity and investment processes;
- development of the scientific and technical base of fundamental importance for business development with the help of tax incentives, stimulation of creation of new high-tech productions allowing to release competitive products for the international market;
- expansion of the system of tax incentives for investment projects, taking into account the advanced international practices in attracting foreign investment;
- establishment of a state insurance system for business investment risks;
- creation of a system of assistance for the development of new organizational forms of investment activity and so on.

In general, investments ensure the sustainable development of business and allow to solve problems such as expanding their activities through the accumulation of financial and material resources, acquisition of new enterprises, development of new areas of business, strategic direction in the creation of diversified production. Also, the implementation of a set of measures to improve the investment climate will allow accelerating the investment process in the sustainable development of business. In this regard, taking into account the instability of the changing environment, it is important to develop mechanisms for the formation of methodological and organizational-economic approaches to the development of investment potential based on the analysis of internal and external factors. Thus, in order to ensure sustainable business development, the investment mechanism must be focused on purposeful changes in the internal environment, taking into account future changes in the external environment.

Plagiarism Rate = 5,41%

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The Development of Social Workers' Professional Competence in Education

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Abstract
Social work is a profession that is constantly changing and looking for new approaches and methods in order to implement the basic principle of work - to help clients overcome problems by diagnosing and solving them themselves. The aim of the article: to answer the research questions: (1) what are the dominant contradictions in the education of future social workers? (2) how to reduce the contradictions existing in education process (3) in what way to promote the development of professional competence of students, future social workers in social work in education in the context of functional sustainability? The publication analyses the content of the study programme, describes the process of formation of professional competence of future social workers at Liepaja University (Latvia), and analyses the potential of students' professional identity and reflection in the context of study quality improvement. Research results: conclusions that reveal the contradictions established in education have been developed, characterize the regularities of the formation of professional competence of future social workers, actualize the factors influencing professional identity and the developing potential of reflection of practical activity in education.
Keywords: Education, student, competence, social work

Introduction

Nowadays, in the context of rapid change, the daily question: how does a person shape and direct his/her existence? is becoming more relevant. A society of change is characterized by diverse pluralistic relations, as well as by coexistence and interaction of several cultures, simultaneous cooperation and competition. All of the above mentioned factors cause social problems. Effective addressing of social challenges requires tolerance in communication between individuals, social, religious and ethnic groups, a dialogue between different views and worldviews, focusing on promoting clarity, understanding, decisiveness and constructive social interaction in the diverse daily communication.

In Latvia, the set of basic values of social worker's professional ethics is based on the following principles of professional activity:

- any person has an individual value,
- respect for human dignity and self-esteem,
- understanding of uniqueness of every person,
- respect for human rights and opportunities,
- tolerance towards the people who are different (Sociālā darbinieka profesijas standarta projekts, 2020; Latvijas sociālo darbinieku ētikas kodekss, 2001).

The principles of social work are the qualities of professional activity, the development of which requires not only appropriate knowledge, but also certain personality traits and a responsible attitude. In social work, the client's interests are priority. The social worker should help the client to develop positively by teaching him/her to overcome the difficulties on his/her own, spotting and utilizing his/her reserves. In social work there is a meaningful concept called developmental crisis. It means that by experiencing and overcoming the crisis, a person has the opportunity to look into oneself and to understand better oneself and the problems he/she is facing, but at the end - to rise to a higher level of personal development. This kind of growth can free people from hopelessness and powerlessness. A professional and competent social worker plays an important role in the management of these personality development processes.

Liepaja University, as an educator of future social workers, already has at its disposal a sufficiently wide knowledge base and practice to be able to perfect the educational model of social work, of course, constantly enriching itself from the world experience. The study programmes "Social Worker" and "Social Work" are implemented in the study direction "Social Welfare" since 2002, preparing social workers on different levels. Professional bachelor's study programme "Social Worker" awards a professional bachelor's degree in social work and professional qualification - social worker (duration of studies - 4 years (full-time studies), 4.5 years (part-time studies)), but professional master's study programme "Social Work", which admits to the programme only students with a previously acquired professional social worker or caritative social worker's qualification, awards a professional master's degree in social work (duration of studies - 1 year). Analysing the admission results of the applicants within the last ten years (2010-2020), it can be observed that the number of applicants in these programmes has decreased, but the topicality of the programmes remain unchanged.

The policy planning document "Guidelines for the Development of Professional Social Work for 2014-2020", developed by the Ministry of Welfare of the Republic of Latvia, states that the numbers and qualification of social work specialists employed in social services in Latvia often do not comply with the requirements specified in the regulatory enactments. The criterion stated in the Law on Social Services and Social Assistance regarding the number of social work specialists per number of inhabitants in the municipality is met only by 58% (self-assessment reports of the study direction "Social Welfare" of Liepaja University from 2016 to 2019).

Taking into account the fact that the development planning documents of Latvia also have a global framework, the biggest challenge in educating social work specialists is making the existing social work education system open to the global context. Ensuring the interaction of the global and local context develops the skills to think globally and act locally at the same time. This is the basis for flexibility of the national education system and its orientation towards global cooperation and mobility. In formal education, this will facilitate the integration of professionally qualified graduates into the labour market and, consequently, the interoperability of education and the labour market (both at national and global levels). Nowadays, a successful self-realization in the professional field is possible by switching from knowledge transfer to co-creation of innovations. It is also important to maintain a balance between education, science, society, economics, social policy and the economy, both locally and globally.

The study direction of education promotes multifaceted educational experience, which ensures the development of competencies for personal and professional self-expression in the changing circumstances. In this education process the openness of cooperation and voluntary partnership with state institutions, local governments and non-governmental organizations are respected. Networking is also important, which promotes the mobility of students and lecturers on a national and international scale.

The research problem

Undoubtedly, the professional activity and mission of social workers, while solving various social problems, is to improve people's practical competencies enabling them to live responsibly and meaningfully in the context of countless everyday contradictions and constant challenges. Social work specialists are often unjustifiably criticized for their different opinions on social work issues, especially related to care and custody rights, as well as on other important issues that help to see the various practical ways how municipalities can get involved in solving the client's problems. In Latvia, there are several social work problems, such as lack of professionals in the profession, insufficient financial support for the sphere, the inability of some specialists to perform their professional functions qualitatively, contradictory diverse professional practice that create innumerable conflicts of goals and interests, balancing between the work and studies, high stress levels, disbalance between the private life and work, as well as many other inconsistencies and contradictions, that create a favourable environment for increasing occupational tensions and daily profession-related challenges. Thus, the education of future social workers and the compliance of the study programmes implemented at the university with the topicalities of practice are extremely important.

The objective of the study

In order to qualitatively assess and perfect the compliance of social work education study programmes with the topicalities of practice and the quality of their implementation at Liepaja University, the following research questions were put forward:

1) What are the dominant contradictions in the education of future social workers in Latvia?
2) How to reduce the contradictions existing in education?
3) In what way to promote the development of professional competence of students, future social workers, in education in the context of functional sustainability?

Research methodology

1. The analysis of theoretical and regulatory knowledge is carried out in the context of professional and competency development of social worker, based on the study "Results of the assessment of the efficiency of

municipal social services and social work specialists and their analysis", conducted on request of the Ministry of Welfare (*Ex-ante* and *ex-post* evaluations for assessing the efficiency of municipal social services), self-assessment report of Liepaja University study direction "Social Welfare" from 2016 -2019, and research and analysis of Latvia Republic laws and regulations.

2. The analysis of professional experience of students – future social workers is carried out on the basis of their internship reports reflecting on their professional activities, their responses to survey questions and responses to open-ended questions on the development of professional competence in education and during the internships.

The topicality of education of the study direction "Social Welfare"

Demand for social workers in the labour market is also determined by demographic challenges (aging population, declining birth rates and working age population, migration), and expected medium-term labour shortages, high indicators of poverty and social exclusion, and limited public and municipal financial resources are the factors that determine the need to plan a system of social services that would be aimed at the restoration of the maximum individual's social and economic potential and a person's integration in the society and the labour market (Sociālo pakalpojumu attīstības pamatnostādnes).

With the development of social entrepreneurship, a new significant challenge for social workers is the ability to work within it with the aim to create innovations for multidimensionality (Human Resources Development Concept "On the Possibilities of Implementing Social Entrepreneurship in Latvia" (Cabinet of Ministers Order No. 618 of 30.10.2014)). (Cilvēkresursu attīstībā Koncepcijas "Par sociālās uzņēmējdarbības ieviešanas iespējām Latvijā" (MK 30.10.2014. rīk. Nr. 618).

The study programmes of education and courses implemented in Liepaja University, study direction of social welfare, are designed in accordance with the needs of employers, development trends in science and practice, and the specifics of social welfare, which determines the development and significance of the study programmes according to the overall direction towards the provision of Latvian social welfare system. The priority is to educate qualified and professional social workers, social policy makers, and heads of social welfare institutions, thus expanding the competitiveness of graduates in the labour market and ensuring national and regional interests.

Social work is a practice-based profession and academic discipline that promotes social change and development, social cohesion and the development of opportunities for person's independent functioning in the society, self-determination and freedom. The principles of social justice, human rights, collective responsibility and the respect for otherness are at the heart of social work. Based on the theories of social work, social sciences and humanities, and expertise, social work involves people and social structures to address life's problems and challenges in order to promote prosperity. The mission of social work is to enable all people to develop their potential, enrich their lives, and prevent dysfunction. Professional social work focuses on problem solving and social change. Social workers are agents of change in society.

Research results: competency of a social worker in education

Within the competency approach, more important than the tasks and duties, is a **person** who carries out these responsibilities – a person's abilities, skills and behaviour, i.e. all the competencies that he/she uses for successful job performance. Competences are people's abilities, knowledge, and skills.

Within the competency approach, by developing and using competency models, it is possible to discover which activity ensures successful or excellent work performance, putting at the centre the development of qualities, skills and knowledge that promote personality traits and behaviour appropriate for professional activity. The education at Liepaja University is based on the competency approach, as it purposefully stimulates productivity and utilizes people's talents, recognizing the differences in individual abilities and assuring achievement of work results.

Competencies are divided into basic groups, which consist of well-defined constructs or qualities. Competency model groups are very versatile. The model of competencies that is relevant for social work consists of four basic groups of competencies:

- Personality competencies;
- Management, process activity competencies;
- Professional competencies;
- Communication, social competencies (Garleja, 2003).

Personality competencies are most often defined by such personality traits as character, perception of the world, temperament, individual cognitive processes (memory, thinking, attention, etc.), personality identity and maturity.

Management, process activity competencies reflect the effectiveness and expression of professional competencies in practical activities. Management competencies are divided into two subgroups: 'I' management competencies and 'WE' management competencies. 'I' leadership competencies show the ability and skill to organize one's own professional work using effective techniques and methods to get the job done quickly, creatively, on time, in good quality and in a planned way, while 'WE' management competencies show how a person fits into a team or group, how successfully and using what methods he/she is able to manage communication and interact with clients.
Communication, social competencies accurately describe the peculiarities of human communication and behavior in the social environment. Most often, it is the ability to adapt and establish contacts with surrounding people, as well as the ability to retain and manage the communication partners, gaining a positive feedback. Social competencies often describe people's ability to resolve conflicts, be a diplomat and cooperate with others.
Professional competencies describe a person's actual work experience, skills and abilities acquired during work, as well as academic knowledge (education, courses, seminars, foreign languages, computer skills, etc.) and their importance in the process of professional development. Professional competencies show the employee's attitude towards work, ability to learn new things and intention to strive towards perfection.
The structure of social worker's professional competency is complicated because it combines diverse social problem-solving competences, practical skills for multifunctional work with people, as well as specific knowledge about the various aspects of peoples' lives.
As a result of purposeful educational work, a sustainable professional identity and competence of a social worker is formed on a daily basis. In order to determine and understand one's own professional suitability and identity, a social worker must answer to oneself a number of questions: Am I professionally suitable for the social work profession? Am I aware of myself as a professional? What promotes and what limits my professional growth? What do I gain and what lose when performing my daily duties? What is my social and professional capital? How can it be multiplied in daily professional activities? Emerging specialists in social work are forced to face numerous professional development challenges, because the entry into the profession is a complex process. All the above-mentioned questions were included in the surveys distributed to students and practitioners in order to get acquainted with their understanding and self-assessment of competencies that are topical for social workers' professional activity.

Table 1. Self-assessment of social worker's competencies

No	Competencies	Competence named by the students (N=70)	Competence named by the social work specialists (N=52)
1.	Personality competencies	28%	10%
2.	Management, process activity competencies	17%	13%
3.	Communication, social competencies	29 %	18%
4.	Professional competencies	26%	59%

Thus, according to the survey data, summarized in Table 1, qualitatively and analytically evaluating students and social workers' professional readiness self-assessment at Liepaja University social work programmes, it is possible to develop a competence-based system, which can offer realistic suggestions for perfecting the study process and actualizing the particular competences, and for developing innovative and up-to-date learning mechanisms and tools for obtaining profession on the basis of internal and external academic and professional development resources. In order to discover the specifics of the necessary changes in education process, it is important to listen to the students' views and reflections on the challenges of the social worker's professional activity during the studies and internships, describing the professional identity.

2. Challenges of social work: research data analysis

Discussions and conversations with specialists of the social sphere and part-time and full-time students studying at Liepaja University in bachelor and master's degree programmes combining studies with work confirm that the question characterizing professional identity are important: what image does a social worker have in the society? Figure 1 summarizes the main thoughts and understanding of the nature and mission of social work as expressed by the respondents – social workers (N = 52) involved in this qualitative study.

A social worker is a professional *- who likes his/her job, and who is called to do his/her job;* *-who dedicates his/her life to work that helps people every day;* *-who is strong in his/her essence, emotionally strong, able to provide help and support to the people who need it;* *-who performs his/her duties in good faith, understands the client, client's problems, and gets involved in problem solving;* *- who, when in contact with the client and his/her problem, is ready to listen, hear, define the problem, react searching for the best solution;* *- who, using various professional tools/methods, identifies the client's problem situation and activates the client's own resources, thus improving his/her social functions;* *-who is not afraid to communicate with other people, is able to control oneself in different situations, is able to be kind and patient even on a day when it seems impossible ...*

Figure 1. Characterization of social worker's professional identity

According to a German psychologist and sociologist, organizational and personnel development consultant E. G. Felaw (2003), when people meet in various daily work situations having different views, positions, hopes, aspirations for power, value systems and goals, disagreements and misunderstandings can rarely be avoided (Fēlavs, 2003, 8). In social work, the social worker's professionalism and personal attitude is absolutely topical.

A responsible employee is characterized by his/her professional loyalty. *Loyalty* is the employee's desire to sacrifice his/her time, opportunities and health fulfilling the job responsibilities. The research on loyalty mentions a three-dimensional model that includes an affective, calculated and normative component. *Affective loyalty* is an employee's emotional relationship with the loyalty object - organization or profession. *Calculated loyalty,* in turn, reflects the employee's practical perspectives or investments, how much the employee gives to the loyalty object, how much he/she also wants to receive in return. *Normative loyalty* refers to the employee's sense of responsibility and usually is influenced by the social environment, professional activity, family and culture. The answers quoted in Figure 1 unequivocally confirm the dominance of normative and affective loyalty in the assessments of social workers, which undoubtedly increases their professional status in the context of social capital in the labour market of Latvia, but not always help to minimise the amount of specific problems.

The statements of social workers, expressed in surveys, confirm on the one hand the fully adequate understanding of social workers' functions and mission, but on the other hand - reveal several ethical dilemmas that need to be solved in everyday situations, revealing contradictions and current perspectives:

- *professional responsibility and lack of collegial support, collaboration;*
- *the client lacks motivation and is not ready to participate, but expects from the social worker to improve immediately his/her situation;*
- *search for the answers when implementing a qualitative professional activity: how to be good and professional both for the management and colleagues, and also for the client*;
- *inconsistency of the client's personal attitude and actions, for example, in matters of ensuring the quality of life for the asylum seeker;*
- *resolving disputes between colleagues on issues of professional social status and prestige.*

As it is summed up by a practitioner with several years of professional experience: *"In Latvia, currently the social work profession is rated very low, therefore the public opinion often is not positive and lacks trust ..."* (from authors' interviews with social workers, 2017).

People's education, work journey and experiences tend to be very different. In successful professional groups/ communities, each person has a place and opportunities where and how to develop his/her individuality. People's personal differences can be utilized as qualities of the working group if tolerance is observed. Thus, sensitivity and respect is needed for other people's views, traditions, behavioural norms, especially towards the groups of different minorities: "Tolerance involves accepting another person, and it is essential in the social work practice" (Sociālā darba terminoloģijas vārdnīca, 2000, 77). On the other hand, as stated by psychologist Udo Heske (2007), an owner of the consultancy and training institute in Bielefeld, management coach: "Tolerance is a virtue, and the boss should set an example by promoting it" (Heske, 2007, 20).

Summarizing and comparing the gains and losses of social work in professional and personal context, according to social workers, the challenges listed in the Table 2 are topical for professional development of social sphere specialists, and they actualize a conscious need for in-depth professional reflection, promotion of open and communicatively constructive collaboration in the problem solving process, as well as the need to ensure a high-quality supervision for all employees in the social field.

Table 2. The gains and losses of social work in professional and personal context

Gains	Losses
• Professional experience	• High burnout risk
• Growth	• Inadequate (low) remuneration
• Colleagues, like-minded people, collegial cooperation	• Negative stereotypes of society
• Opportunity to try something new	• Limited possibilities due to lack of resources
• Creativity, no routine	• Emotional overload
• Acquisition of new methods and approaches	• Normative operation
• Changing of customer's behaviour pattern	• Increased stress levels
• Awareness of the meaningfulness of work	• Feelings of pointlessness
• Formation of professional confidence	• Problems develop in the family, formation of mistrust in people
• Feelings of satisfaction	• Loss of free time

As it can be seen in Table 2, in the professional development of social workers the person's personality qualities becomes essential: formation and strengthening of mediative attitude, development and implementation of self-experience and self-reflection in the cycle of daily duties, understanding of individual professional growth needs, emotion management, balancing and control, analysis of one's strengths, social and mediative competence, which to a large extent is able to perfect the professional activity of social workers and interaction with the clients.

Recommendations for improving the competency of a social worker

One of the social worker's practical tools is a problem-oriented communication with clients, during which consultation takes place. Consultation is a form of assistance that focuses on the needs and goals of the assistance-seeker (McLeod, 2003). In social work, consultation and support are specific professional activities, which help the client to renew and discover his/her intellectual resources, balance emotional states, and they open up various opportunities searching for alternatives and making appropriate problem-solving decisions in cooperation with the client. Consulting is a professional advice of a specialist, a clarification of an issue, provision of recommendations; an additional session for clarifying an issue; opportunity to obtain a scientific, methodological or practical advice; the type of psychological assistance, as well as psychological counselling as a process for determining the activities necessary for the client. The consultation process must promote the exploration and investigation of the problem, its deeper understanding, and influence the assistance-seeker's thinking followed by actual behavioural amendments.

The relationship between the assistance-seeker and assistance-provider must be designed in a way that is mutually acceptable and based on the following important principles:

- acceptance;
- individualization;
- client's self-determination;
- distancing between the assistance-provider and the client and his situation;
- assistance must start at the place where the client is at the moment (Plaude, 2001, 32).

A successful consultation and support process is ensured by the following principles of professional activity and communication:

- to promote and maintain a client-supportive communication during the conversation;
- to base conversations and relations on mutual trust and openness;
- to emphasize the client's participation and responsibility for the results achieved;
- to believe in the client's ability to perform better than currently;
- the focus of the conversation must be oriented to the client's thoughts and experience;
- to believe that the client can generate perfect personal solutions;
- the conversation is based on equality and tolerance, understanding and encouragement.

The basic professional consulting skills of a social worker are characterized by empathetic understanding, respectful attitude towards the client's personal abilities to shape one's own life, truthfulness and naturalness of the relationship.

The objectives of consultation:

- adjustments (help to solve current problems, overcome transition periods, overcome depression, find a way out of crisis situations, etc.);
- growth or development (developing specific life skills in periods such as transition to an independent lifestyle, search for a partner, raising children and adaptation to one's age, etc.);
- increasing people's responsibility for their personal lives: the clients must be able to feel, think and act effectively.

The ultimate goal of the consultation process: to teach the client to help him/herself and thus to teach to be one's own consultant in various problem situations of life. A person-oriented consultation model, which is described in this publication, emphasizes the meaning of an '*I' concept,* reveals the causes of inadequate behaviour, and provides the means for helping the people to become aware and understand themselves.

Each person has some undiscovered reserves of self-awareness and self-exploration, which contain an internal, unutilized development potential. For discovering it, an appropriate psychological climate and encouraging environment is required, as well as professionally competent orientation in terms of becoming aware of one's own being, needs and internal conflicts.

The effectiveness of the consultation is determined by the quality of the consultant and client's interaction during the conversation, unconditional acceptance of the client, empathy and positive communication. Therefore, the success and results of consultation are largely determined by the professional competence of the consultant, his/her attitude and style of expression during the conversations with the client.

In the consultation process, the interaction between the social worker and the client is professionally important, helping the assistance-seeker to identify the problem, see its causes and find adequate solutions. The client- and problem-oriented interaction requires collaborative communication based on mutual dialogue, in which one person purposefully works (consults) with the other (client) to achieve certain changes: change of attitude, understanding and analysis of problem, appropriate assessment, and other results obtained in the collaboration process. Collaborative communication is facilitated and ensured by such skills as:

- listening
- asking questions
- reflection to promote high-quality conversations and develop the individual's experience.

In particular cases the social assistance is implemented in three stages: case study, i.e. data collection with the active participation of clients; psychosocial diagnosis of the relationship system in which the client is located, the interaction of their causes and consequences and their interpretation; and individual case solution, which uses conversation, consultation and training methods to resolve conflicts until the personal and material environment gets changed. Social assistance in individual cases is widely used in practice. The purpose of the individual assistance is not the client's adjustment to the society, but the identification and awareness of his/her emotional and social needs. The operational concept also includes the environment, such as family. The assistance means helping the client to reach internal mental change, by promoting the client's natural abilities and creative energy and providing solutions to his/her emotional, social and economic problems (Plaude, 2001, 31).

There are two types of social assistance when working on individual cases: forms of direct influence (consultation, training, necessary therapy – individually or in a group), assistance measures (finding employment, taking responsibility, learning specific social roles, transfer to another school, social-pedagogical family care, etc.) and forms of indirect influence by other persons or groups, if the client has agreed to it. The process of social assistance is implemented productively if a social balance is achieved individually between the client seeking assistance and the problem in a way that the client can cope with the consequences of the problem him/herself, i.e. has developed his/her individual problem-solving competencies.

The communication competence, as well as the problem and conflict resolution competence, is based on individual's ability to learn from his/her own experience and use this experience in purposeful management of one's activities, overcoming operational limitations and obstacles, promoting respectful relationships and constructive dialogue.

Discussion

The information obtained in this research confirms that in the educational process no study courses can be taught in isolation from the practical context of social work. This is the truth dictated by life and practice, because education must be meaningful and conscious, constantly reflecting on one's professional activity and professional identity. In social work, it is very important for every specialist to acquire the following skills:

1) learn to know oneself,
2) learn to transform oneself,
3) on-going work on one’s own transformation. Thus, personal competence is developed and perfected as a basis for high-quality professional activity.

The research on professional experience of social workers confirms that every day the following forms of social interaction are becoming more and more relevant, they expand the professional opportunities of social workers in problem solving, and promote constructive interaction when solving social problems:

- dialogue on diverse and complex experiences;
- activities focused on harmony and cooperation;
- formation and actualization of mutual responsibility in decision-making and implementation;
- constructive problem solving;
- professional reflection and self-reflection.

For targeted, high-quality professionalization of education of social workers, the lecturers' educational style should present a clear view to students about their professional future, providing the ability for self-assessment. The knowledge in organizational management and perfection of interactive skills are important. Successful social work always takes place in a dialogue between a social worker as a problem solver and a client as problem initiator, promoting the actualization and revelation of the client's individual resources.

Communication and interaction skills in social work are as important as the acquisition of complex intellectual systems. The goal is always the client's social change, personal growth and self-actualization. From a social worker this requires accountability towards his/her clients and a high level of professionalism that enables discovering new sources of growth.

The clients, in cooperation with social workers, gain the greatest possible control over their lives, so that they can learn and solve personal life problems being self-motivated and self-determined. Knowledge is not independent from a person; it is rooted in a personal system of meanings and values.

Emerging social workers and practitioners gain new knowledge through joint activities and a common search for truth and answers during their internships. In the process of cooperation and interaction, diversity of opinions is promoted. The search for truth and identification of needs takes place in cooperation and dialogue, and the operational goals are set that are deliberately subjected to further research.

The strength of the relationship based on mutual trust and cooperation ensures overcoming prejudices and emphasizing the diversity of social problems in several dimensions of professional activity:

- at variable activity level of clients,
- at the level of social interaction,
- at the level of social workers’ professional activity.

Different understandings of events and causes (the understanding of conflict may differ in the view of a social worker and the client) are often the reason why it is not always easy to understand the depth of the client's experience, but for the social worker – to control their emotions and vice versa.

Overcoming barriers of misunderstanding is possible if the social worker has got acquainted with the peculiarities of each individual case, observes the interests of clients, their beliefs and gained experience. The moral dilemmas and practices, which can differ significantly from the theoretical knowledge and the regulatory framework, can mislead the social work professionals and make them face contradictions. These nuances of the problem can only be addressed through dialogue, consultation and support, providing opportunities to discuss the basic principles of collaboration.

Conclusion

In today's fragmented, pluralistic world, harmony and cooperation can be achieved not by affirming differences and competition, but by seeking unity in the diversity of life, factors that promote collaboration and responsibility, as well as the resources for strengthening values of social communities and growth.

In today's fragmented, pluralistic world, harmony and collaboration cannot be achieved by affirming differences and competition, but by seeking unity in the diversity of life and factors that promote collaboration and responsibility, strengthening the values of social communities and personal resources for growth.

As people perceive and experience the world individually, it must be kept in mind that each person's suffering will always (in a sense) be beyond our own experience, and in order to remain socially and emotionally open and learn more about each other in order to help solve individual problems, this fact must be treated with the respect. Sufficient attention must be paid to the issues of professional ethics and solving dilemmas already during the acquisition of the study programme.

Faced with numerous social work constraints, which contributes to the generalization of clients' experience, it is understandable that there is still a significant abyss of knowledge, which can be overcome with the purposeful formation of social workers' empathic attitude and professional development during the process of education.

The authors of the article believe that personal motivation and the lifelong learning factor play a decisive role in the social sphere. An integral and important internal resource of each social worker's professional development is his/her ability to learn and improve through the analysis of everyday conflicting situations, through reflective activity and social interaction process, which step by step promotes purposeful collaboration and reduces both conscious and unconscious competition.

Plagiarism Rate 6%

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Future challenges in social work education and practice

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Abstract
The specifics of social work are changing due to social and global trends. The development of education influences future professionals and the contribution of social work to Latvian society. Social work in all institutions is not performed according to the same criteria and methods. The aim of the research is: To explore the importance of a social worker 's professional conversation with clients in the context of a systemic approach. To study alternatives and develop theoretically and empirically grounded recommendations for the implementation of a systemic approach in psychosocial work. In the practical part, an empirical method is used - questionnaires, structured interviews. Data processing was performed in a computer program. The calculation of the Friedman test in the computer program SPSS was used for the expert evaluation. Factors influencing professionally managed conversation with the client in the context of the systemic approach have been identified and researched. Working with the client in the psychosocial field helps to solve the problem purposefully. Methods have been studied to improve social work with clients in municipal social services. A systemic approach has a real opportunity to be integrated into psychosocial work with families with children. The research proves that by using different methods, approaches to working with clients, solving their problems can contribute to improving the client's quality of life. The study reveals new opportunities and challenges in social work and education.
Keywords: Social work education, systemic approach, psychosocial work, burnout, methods

Introduction

According to the international definition, social work is not only a profession of practical support, but also an academic discipline. This is important because, by emphasizing the importance of education, social work is also accepted as a field of science. Social work education and social work in practice are not separated from the processes of social change that are taking place in the world and also in Latvia. This was particularly evident in the context of the COVID - 19 crisis, which saw changes in both the education system and the social work system. The development of education affects future professionals, because the social work profession changes over time and it is necessary to respond accordingly. For many people, change leads to a lack of confidence, insecurity and anxiety about the future. Social workers need to work on a daily basis, taking into account new contexts and conditions. Changes are important both in the social work system and in other public sector organizations. It is necessary to change the aging structures and ways of thinking, to emphasize the move towards innovation, in order to create organizations that meet the goal in today's world. From the point of view of social change, the questions become self-evident: what needs to be re-learned, what knowledge, skills and competences do social workers need, what needs to be critically re-evaluated, what are the strengths of our accumulated experience? Similar questions about social work are asked in other countries. Gibson, Carroll (2019) explain the importance of working with others as social workers, and social work programs seek to provide students with unique, innovative interprofessional learning opportunities (Gibson, Carroll, 2019). Theoretical schools of social work education and research offer various points of view and paradigms for the substantiation of social work practice models and other topical issues, for example: social work and politics, intercultural competence, issues of axiology of social work research, education and practice, innovations in working with target groups, etc. c. Social workers know that social problems are most often caused by a lack of knowledge, followed by inappropriate and ineffective solutions when circumstances change. This happens both

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at the level of individual cases and at the level of institutions or management. The essence of change is new opportunities, the awareness and management of which can strengthen confidence and security and give a strong impetus to productive practical initiatives. Knowledge is a particularly important and characteristic feature of today's society, and we live in a society of knowledge and new technologies. Reirs (2017) highlighted four important directions as tasks of academic discipline. 1.Knowledge creativity - Awareness of change and opportunity is fostered by research, and in this way new knowledge can be acquired. 2.The transfer of new knowledge - education plays a key role in preparing for working in the profession. 3. The need to promote the dissemination and accessibility of knowledge through its dissemination in a variety of ways, including the writing of books and articles. 4.The use of new knowledge in practice - it is the use that needs to be emphasized, because only in this way can the compliance of knowledge with needs and real conditions be verified (Reirs, 2017, p. 11). Vilka (2017) explains that currently social work education has two mutually contradictory but very important factors - one is the need for vocational education, the other - education as a business. Both are difficult to reconcile or even incompatible with the sense of idealism and missionary work attributed to social work by the first generation of social workers in Latvia in the 1990's (Vilka, 2017, p. 47). Prolonged social work does not achieve positive changes in the client's life, social workers are exposed to the risks of professional burnout. In Latvia, a discussion is currently underway on the development of the social work sector - both on the education and practice system in this area. Discussions take place on issues of knowledge, skills, competences and professional ethics. Problems of education and practice in the profession were actualized according to the order of the Cabinet of Ministers "On the Guidelines for the Development of Professional Social Work 2014–2020. and for the next period 2021-2027. (MK,2013). Currently, a new social worker profession standard is being developed in Latvia that meets modern needs. Social work is a value-oriented intervention process, with the aim of creating social change that contributes to solving social problems in the interaction of people and the environment. Working with the client in the psychosocial field helps to solve the problem more purposefully. This are focused on the development of customer resources, where the indicator of change is the customer himself. Exploring psychosocial systemic work is the beginning of a process of change in social work. It is a step towards raising the professional qualifications of employees. In the process of systemic counseling, the client's readiness and motivation to cooperate with the social worker is of great importance.

Problem statement and sub-problems. The range of tasks of a social worker is broadly defined. Sometimes too little attention is paid to the importance of the employee-customer relationship. More attention is paid to problem solving, leaving people in the background. However, it is positive communication, deliberate and professional conversation with the client that can help solve the client's social problems. Too little attention is paid to the social worker 's ability to conduct a professional conversation with the client in special circumstances in a COVID - 19 crisis situation. Many experts in their field, professional social workers, long-term social work with families with children, do not achieve the expected results, positive changes in the client's system. Insufficient psychosocial work with families. This is one of the most significant risks of professional burnout of social workers.

The aim of the research: To study the importance of a social worker 's professional conversation with clients in the context of a systemic approach. To identify obstacles, to study alternatives and to develop theoretically and empirically substantiated recommendations for the implementation of a systemic approach in psychosocial work in Latvian municipal social services.

Tasks of the research. 1.To study psychological, pedagogical and social work literature, normative acts, research on professionally conducted negotiations, counseling, factors influencing the systemic approach of communication. 2. Analyze definitions in the context of social work theories. 3. To study how a professionally directed conversation of a social worker with a client is in line with the professional standard of a social worker. 4.To study the training of social workers in the approach of systemic psychosocial work. 5**.** To describe the advantages of using the systemic approach in psychosocial work**. 6.** To find out the opinion of social workers about the application of systemic psychosocial work in Latvian municipal social services in work with families with children, incl. to find out the readiness of social workers to learn and apply the Systemic approach in psychosocial work with families with children. **7.** To find out the opinion of social work students about future challenges in social work education. 8. To develop a questionnaire for the empirical research, to conduct a survey and interview of respondents. 9. Summarize the results obtained in the research and develop conclusions.

Research Hypothesis: If the social worker uses a systemic approach in psychosocial work and professionally manages the conversation with the client, the client will be positively motivated in solving the problem situation.

Method

Method of the research:

Theoretical research methods: research and analysis of scientific literature, analysis of regulatory enactments and documents on the chosen topic. Empirical researtch methods: Questionnaires of social service managers, questionnaires of social work specialists, structured interviews, expert interviews. Respondents were divided into five groups: 1. Heads of municipal social services, which organize and ensure the process of social work. 2. Social workers who perform psychosocial work with the family on a daily basis. 3. Social workers who perform social work with clients in social housing in one municipality. 4. Interviews with experts in social issues. 5. Students studying Social Work. Mathematical data processing, collection and analysis of quantitative data (surveys) and qualitative data (interviews). Data were processed using Microsoft Excel program. The calculation of the Friedman test in the computer program SPSS was used for the expert.

The quantitative and qualitative methods used in the study are based on the scientific findings of sociologists Paula (2011), Mārtiņsone, Pipares (2011), Kristapsone (2014) and others.evaluation. According to Paul (2011), the diversity of group research and the methods used depends on the type of group, circumstances, research questions and other aspects. In the quantitative approach, the trend is towards searching for the main trends, testing hypotheses. Surveys, questionnaires, standardized interviews are used as data acquisition methods. The qualitative approach examines how individuals themselves interpret social reality. Qualitative research uses semi-structured interviews or free interviews, case studies (Paula, 2011). Mārtiņsone, Pipare (2011) believe that the survey is one of the most popular data acquisition methods. The survey is designed so that the author obtains the necessary quantitative data from his chosen respondents. Paula (2011) acknowledges that a semi-structured in-depth interview provides direct insight, information into the respondents' life situation and daily life. With their help, the causes, manifestations and problems of social exclusion, which are characteristic of the target group, can be clarified (Paula, 2011). Kristapsone (2014) points out that the aim of qualitative research is to show the necessary information that they want to achieve from their chosen topic and respondents. The aim is also to show others what the view means, what the main problems are, and what the author wanted to show others about their chosen topic (Kristapsone, 2014). Nowadays, there is a tendency to synthesize a quantitative and qualitative approach in research.

Research respondents sampling.

Research base: Latvian municipal social services, Consultative Division of the State Inspectorate for the Protection of the Rights of the Child, Liepāja Municipality social residential houses, University of Liepaja.

Research respondents: Heads of Latvian municipal social services (36); Social work specialists of Latvian municipal social services (36), Specialists of the Advisory Division of the State Inspectorate for the Protection of the Rights of the Child (3), Latvian social work experts (3), Liepaja University social work students (30). One of the aims of the survey was to find out the opinion of the institutions whether and to what extent the Systemic approach is used in psychosocial work with families with children already in the work practice of social services. Identify the vision of the institutions - what could be the potential benefits if a systemic approach to psychosocial work with families with children is introduced in social services and what measures should be taken to implement it.

Data collection tools: Questionnaires and interviews were identified as the most appropriate research method to obtain empirical data. One of the main factors that determined the choice of such research methods was the target group of the proposed research, Latvian municipal social services and their social workers. Taking into account that the target group is very wide and the aim of the study was to obtain comprehensive information on the application of the Systemic approach and its implementation perspectives in social services throughout Latvia, two different questionnaires were prepared to obtain data. Questionnaires were sent electronically. The questions in the questionnaire for social services focused on finding out the institution's opinion on the application of the Systemic approach in psychosocial work with families with children, its efficiency and effectiveness. On the perspectives of implementation of the Systemic approach and use of this approach in the operation of the institution, including what resources, processes and initiatives (administrative, financial, political (municipal management support, etc.)) are needed to implement the Systemic approach in psychosocial work with families with children in Latvia municipal social services. The questions are structured, including the aspects necessary for an in-depth analysis of the situation in Latvia and offering possible answers. Respondents were provided with opportunities to understand the essence of the questions asked and at the same time more conveniently provide an answer appropriate to the specific situation. It was possible to give more than one answer, marking the respondents with what is considered correct and appropriate in the specific situation. Respondents were also able to provide additional information. As a result, it was possible to obtain comparable data that could be used by the social services to provide the necessary evidence base. For social workers' social workers, the questions were focused on ascertaining the subjective opinion and personal experience of social workers as specialists in the researched problem. On the skills of social workers in the previous period Systematic approaches and their application, training, professional development, career, etc. It is important to receive answers that are as precise and unambiguous as possible, revealing the subjective opinion of specialists. Questionnaires were sent to social workers who have mastered the program Systemic Approach to Psychosocial Work with Families with Children for 360 academic hours and work with this method.

Reliability and validity of data: In order to get a broader view and more valid information, a total of 15 social workers from one Municipal Social Housing and other employees who have regular contact with clients were interviewed. A total of 36 questionnaires were sent to Latvian municipal social services, completed from 35. Evaluating the quality of the received questionnaires, the authors concluded that all 35 questionnaires were filled in correctly and, therefore, are valid for data processing. The other questionnaires received were also of good quality.

Analysis techniques: Data processing was performed in a computer program. The calculation of the Friedman test in the computer program SPSS was used for the expert evaluation. The research data were analyzed by several methods. One of them is a descriptive method to analyze what has happened in the past. This method allows you to see a clear and understandable picture of everything that has happened so far, from a large amount of data. The main purpose of the diagnostic method is to find and identify the causes of various discrepancies or problems. This method will help you find a reason, it can be used to understand positive things. Data analysis, interpretation of empirical research is important for testing the hypothesis and achieving the goal.

Reearch time: Year 2019 – 2020.
Theoretical research is based on Auza, A. (2013), Connolly, M., & Harms, L. (2015), Coyle, S. (2020), Gibson, K., Carroll, M.J. (2019), Yang, H., Wang, R., & Chen, H. (2020), Kemp, P. Susana, Tracy, M, Elizabeth, Vithaker, K.James. (1997), Konuševska, G., Kiseleva, D. (2016), Lass, I. (2013), Montero, AL, (2018), Morano, C. (2017), Omarova, S. (2002), Osmond , J. (2006), Paula, L. (2011), Payne, M. (1997), Payne, M. (2001), Reimers F.M. (2020), Reirs. J. (2017), Schubert, M. (1982), Vilka, L. (2017), Viša, K. (2013), Voinarovska, G., Vereščagina, I. (2018) and other authors, Latvian legislation .

Findings

Communication, communication and the nature and characteristics of conversations in social work theories

The terms "communication" and "communication" are broadly defined and explained. However, their nature remains the same in the various definitions. Omarova (2002) explains that Communication is a direct or indirect contact process, the aim of which is to influence the partner's (partners') behavior, emotions, dispositions (attitudes and attitudes), level of activity and activity. Communication is a process of exchanging information, during which the partners try to realize their goals, needs and interests by interacting with each other. On the other hand, the definition of the term “conversation” does not appear in the literature as broadly as “communication” and “communication”. The structure of the conversation, the participants in the conversation, and the goals are analyzed more. Conversation is oral communication, exchange of ideas to find out the position of the parties (Omarova, 2002). The concepts of communication, communication and conversation are quite similar, but communication is a much broader set of events than communication and conversation. Communication is the direct exchange of information between partners but communication is a process that meets a person's social needs. Communication is a broad concept that includes a person's social functioning, referring to a person's personality, needs, emotions. Communication, on the other hand, is a process that involves communication that provides people with oral and non-verbal communication and understanding. But conversation is a form of communication in which people communicate verbally with each other, with the aim of finding out the thoughts and positions of the interlocutors. These terms can be adapted in the context of social work, because the activity of a social worker is focused on changes in solving the client's problem. Solving social problems is a process in which the client is involved, and social work is focused on the client, not the problem, thus implementing a person-centered approach to social work. The client must find the best possible approach to his / her development and survival, while the social worker must be able to create optimal conditions for the development of a particular client's abilities and interests. Customer-centric theory. Payne (1997) believes that the professional relationship between the client and the social worker is the most important aspect of social work, and the social worker should give importance to the client's experience and lifestyle, which can serve as a resource for problem solving. The client's ability to functionally use external resources is a determining factor in social problems. The client's ability to cope with the current situation is essential in the process of evaluating social work (Payne, 1997). The social worker must have information about his client's experience, way of life, available external resources, ability to deal with the problem situation. The social worker must be in the process of obtaining information, or in communication with the client. The most widely and conveniently used form of communication with the client is conversation, but no less important within this theory is a positive relationship between the client and the employee. The customer-centered approach is closely related to the Eco-systems theory, which is the basic theory of social work. The main goal of a social worker is to promote changes in the client's problem situation, the client-centered approach is a way to implement and activate the principles that are important in systems theory. Ecological systems theory. The theory of ecosystems has acquired its importance in social work since the seventies of the last century. Kemp, P. Susana, Tracy, M, Elizabeth, Vithaker, K.J. (1997) point out that in the context of social work this theory has been analyzed by such specialists as Carol Meijer, Kerela Germane, Alex Giterman, Max Siporin, Antonio Malcho, as well as Kurt Levin, Uri Bronfenbrenner, Nicolas Hobbes. Connolly & Harms believe that Systems Theory could only be the foundation needed to maintain the social work profession by providing a unifying approach. The basic issues of ecosystem theory are related to the customer's environment, but the term "environment" is ambiguous in this context. The environment, from the point of view of social work theories, is multidimensional and includes: 1. The environment perceived by a person, which is formed from the system of ideas of an individual; 2. A physical environment that is natural or man-made; 3. A social environment consisting of relationships in different systems; 4. Institutional and organizational environment; 5. Cultural and socio-political environment. Changes in any of these environmental levels can affect other environmental levels - this is the basic idea of ecosystem theory (Kemp, P. Susan, Tracy, M., Elizabeth, Vithaker, K. James., 1997). Social work should promote changes that have a positive impact on the client's quality of life. There is a close link between functional relationships in different social systems and a positive quality of life. Functional relationships with the necessary systems and persons are also singled out as one of the objects of social needs, as deficiency is considered a social problem. Everyone needs not only the availability of systems at different levels of the environment, but also a functional relationship with these systems. Schuber, M. (1982) consider that purposeful conversation and mutual cooperation in social work is comparable to an interview in which the social worker is a professional interviewer whose goal is to be able to provide appropriate help from the information provided by the client (Schuber, 1982). In order to promote system interactions and change as they are analyzed in eco-system theory, it is important to remember the principles underlying communication theory. Auza (2013), Cannolly & Harms (2015), Konuševska & Kiseļeva (2016) believe that systems theory is still important in social work thinking and practice, as it forms the basis for a great understanding of social work about adapting and overcoming people at a disadvantage. A study by Cannolly & Harms (2015) reveals that there have been three main waves of systems theories, ranging from a focus on general systems theory to ecosystem and, more recently, complex systems theories, as systemic thinking has evolved in response to modern needs. The authors of the study consider: 1. The communication process is a set of activities in the contact process. The purpose of the process is to influence the individual's emotions, thoughts, actions. 2. Communication is the process of exchanging information between participants. 3. In order to obtain information and exchange ideas, the negotiation method is used. Communication involves both communication and relationships, and conversation is a verbal expression of communication. 4. In a customer-centric approach, it is important to build personal contact with the customer, get to know him. The obtained information is used to solve customer problems. During communication with the social worker, the client is aware of himself, his opinions. 5. Within the framework of ecological systemic theory, the role of communication is in promoting changes in customer systems. The employee's conversation with the client is purposeful. The social worker must be aware of his influence on the client's binding systems. 6. Communication theory emphasizes the client's understanding of the role of a social worker, his competence. Communication is effective if it meets the customer's expectations. The social worker must be able to observe the client's expectations, provide appropriate feedback.

Professional communication of a social worker with a client

Communication determines the formation of a positive relationship between the client and the social worker, using a professionally conducted conversation as a means. To successfully use conversation in social work, it must be based on positive communication between the client and the social worker. The skills of a social worker to communicate are defined in the professional standard: "Communication skills (incl. Interviewing, effective information exchange, empathy skills, etc.); support and encouragement skills; information gathering and analysis skills." A professional social worker must be able to communicate with the client by distancing himself / herself from his / her natural and intuitive communication skills. In the process of obtaining and analyzing information, one's own notions and stereotypical conclusions must not interfere. When performing social work, the client must be accepted with his perception of the world, values, past experience. It is determined by the professional standard of a social worker, a code of ethics, and the principles of social work. Based on a customer-centric approach, everything inherent in the customer can be used as a resource for problem solving. Schubert (1982) believes that the social worker's ability to be aware of specific emotions caused by certain types of persons raises the quality of work, because the social worker learns to avoid the undesired effects of these emotions (Schubert, 1982). Important roles in the context of the above theories are: educator, socializer, maintainer of social values, mobilizer, behavior changer, enabler, confrontator, listener and explanator. The professional activity of a social worker, defined in the professional standard, envisages the creative use of professional roles. In fulfilling their professional roles, creating contact with the client, it is important to lead the conversation so that the client, based on the principle of voluntariness, is able to find a solution to the problem, an exchange of views. Schubert (1982) equates a social work conversation between a client and a social worker with an interview. The idea of a professional conversation is based on mutual relations, interaction, but the social worker retains his professionalism. The professional is specially prepared for this process, follows the guidelines of the interview principles - the beginning of the interview, standard phrases, adherence to the guidelines, or not deviating from the topic, the duration of the conversation, the end. In the context of social work, a working method such as active listening is important. The social worker's ability to apply the principles of the interview to the client ensures a conversation during which the social worker takes on the role of a professional, takes into account the principles of communication, directs the conversation to a specific goal, allows the client to speak so that the client reaches conclusions. The authors of the study consider: 1. It is necessary to follow what the client says, to be able to ask such questions that cause the client to think, which leads to solving the problem. 2. If the client's views and statements differ from his / her actions, confrontation should be used - the potential client does not see any significant facts in a particular situation, and a social worker is needed to make them aware through the confrontation. In order to be able to confront skillfully, it is necessary to use the social worker's knowledge of the facts about the clients, which, in turn, the social worker acquires by listening to the client's story, without being surprised by the conclusions. 3. The goal of active listening is to make the client feel understood, encouraged, and willing to remain responsive. Active listening is divided into three steps - calling, listening and reflection. Active listening errors can lead to customer distrust.

Model of practice of systemic approach of psychosocial work

The psychosocial approach, on the one hand, can be seen as a perspective level theory or one of the paradigms of social work. Lāss (2015) believes that psychosocial work is a specific theoretical and practical model of social work, the development of which is significantly influenced by the development of psychoanalysis, ego psychology, E. Erikson's stages of psychological development, humanistic psychology, cognitive and cerebral and other psychology. in the theory and practice of social work (Lāss, 2015). Psychosocial systemic work is one of the basic methods of social work in the work with an individual and a family in the framework of case work. Lāss (2013) explains that, in essence, the concept of psychosocial work can also be used as an analogue to the concept of work with a case. Auza (2013), on the other hand, has studied and described the Systemic Approach, Systemic Behavior and Systemic Methods. Systemic approach. Changes are only possible with the consent of the person changing. People are not machines and therefore not controllable, they can only change themselves. Change is facilitated by a situation in which those involved feel good. The task of consultants is to discover or invent new options and actions for clients (Auza, 2013). Systemic behavior. Respect for the autonomy of the person you work with. Respect for his right to dignity and recognition, even if he behaves in an unacceptable way (Auza, 2013). Systematic methods. Tools for expressing the above behaviors in solution-oriented negotiations, resource issues, compliments, task clarifications, invitations and offers, etc., as well as for developing ideas for solutions and making behavioral changes imaginable (Auza, 2013). In social work practice The systemic approach is used in psychosocial work with families with children or solution-oriented social work. Viša (2013) believes that the Systemic approach emphasizes important aspects that should be taken into account when performing Systemic psychosocial work. Every person lives, develops and changes, so does his relationship with other people. What is important is the individual's unique social network, in which the individual's life models and life stories are formed, which in turn influences the individual's life in different directions. The systemic approach emphasizes the principle of respect for each individual, social class, ethnicity and religion. If the principle of dignity is not observed, then it is inevitable to focus on the client's problem areas, which does not lead to any progress towards a positive solution. The systemic approach emphasizes human resources and opportunities to create a new constructive context. It emphasizes the future, hopes and dreams, allowing new talent to emerge. If the client is convinced that the social worker is serious about his or her well-being, he or she will not be afraid to reveal the personal details and problems of his or her life (Viša, 2013). In psychosocial counseling, the focus of the social worker's (counselor's) activity is on the client's environment and relationships, providing the client with psychosocial support, as a result of which both social and psychological aspects of the client's situation improve. Psychosocial counseling is based on the relationship between the social worker (counselor) and the client, because the purpose of counseling is to help the client to build better relationships with the environment and peers. Relationship building is most important in social work to be able to help the client productively, to identify his needs and resources, so that the client can solve his own situation (Vainorovska, Vereščagina,2018). Research reveals that social work is a values-oriented intervention process, with the aim of creating social change that contributes to solving social problems through human-environmental interactions, with the aim of promoting the well-being and quality of life of individuals, social groups and society as a whole. Learning about the Systemic Approach to Psychosocial Work is the beginning of a process of change in social work and a move towards raising the professional qualifications of employees. Working with the client in the psychosocial field helps to solve the problem purposefully, to ensure a professional conversation. It is focused on the development of customer resources, where the indicator of change is the customer himself.

Perspective of interprofessional education and practice

Professional assistance in the field of social services is increasingly called upon to provide person-centered social services. This requires working as part of an interdisciplinary team to identify interventions that are both beneficial and culturally competent. However, practically not working with other specialties related to social work during education. It is difficult for practitioners to work together to effectively achieve the best results for the people in their care. In response to these challenges, there has been a growing need for effective interprofessional education (IPE) and interprofessional practice (IPP).

Payne (2001) believes that social work is based on a wealth of knowledge. It is important to define the process of professionalization, to determine training and education programs, to determine the knowledge useful for practice, and to determine the professional roles in a multidisciplinary team Payne, 2001).

The growth of competency-based education is a challenge to balance a number of disciplinary competencies specified in the professional standard. Morano (2017) highlighted this problem in the U.S. health care system. He believes that changes are needed in the health education system. An interdisciplinary learning process plays an important role in including it in social work education programs (Morano, 2017). Montero (2018) points out that the European Social Network (ENS) study concludes that the involvement of clients in the educational process is important in the training of social work specialists. In this way, it bridges the gap between the academic environment and everyday practice (Montero, 2018). In Latvia, too, changes are currently being made in the education system, programs are being researched, and the standard of social work education is being improved. Interdisciplinary study courses are integrated into the study programs of social work specialists. It is an ideal resource for changing social work education. Coyle (2020) points out that effective community work requires interprofessional cooperation. Interprofessional practices are most often discussed in the context of health care - doctors, nurses, social workers and other mental health professionals come together in the health system to prevent and solve problems (Coyle, 2020). The need for cooperation in interprofessional practice was exacerbated by the Covid 19 crisis situation. Cooperation with other field, system specialists, provided the population with timely social services in a crisis situation. Rapid responses to change have made it possible to change the forms of the learning system in schools and universities, from school to distance learning. Acquiring new digital skills is a resource for future studies and practical work. The Internatıonal Federatıon Of Socıal Workers (IFSW) stated that social work universities around the world were closing down in full due to COVID 19. However, it is important for students to acquire knowledge and for teachers it is important to provide all technological and pedagogical resources for continuing studies - online pedagogy (IFSW, 2020). Reimers (2020) explains in his book that one of the most important goals of education is to help each student develop a sense of purpose. Develop students' intellectual autonomy and emotional maturity to generate ideas for what efforts are worth pursuing. Involving students in real-world challenges is a way to help them develop this sense of purpose (Reimers, 2020). The professional perspective focuses on expert knowledge and supports reliance on competence as a basis for practice. It aims to structure the roles of educational practitioners so that they can communicate their expertise with expert knowledge and help generate such expert knowledge as a driver of change. According to Reimer (2020), the professional perspective assesses not only the competence and professional knowledge of practitioners, but also expert knowledge in general, so research and evaluation are important aspects in this view, as are learning resources designed to reflect knowledge and support expert learning practices. (Reimers, 2020). Yang, H., Wang, R., & Chen, H. (2020). The study noted that Social organizations can improve their professional status and brand identity. It is necessary to: 1. improve their professional culture and advertising systems; 2. to promote the development of institutional credibility; develop professional service projects (Yang, Wang, & Chen, 2020). Osmond's (2006) study emphasized that knowledge is used for both conceptual and instrumental purposes, and ten main functions have been identified: awareness, prediction, warning, comparison, generalization, direction of practice, promotion of attitudes and / or ethics, education, relationship building. and problem solving (Osmond, 2006). Based on a theoretical study and to test the hypothesis, a practical study was conducted.

Results

Research of scientific literature, empirical research. The practical significance of the research is revealed by the answers given in the interviews, the opinions of social workers and experiences of working with clients in social housing, as well as the observations and conclusions made in the research practice. In turn, theoretical approaches encourage social workers to form professional relationships with clients, use methods such as active listening, paraphrasing, confrontation, emphasize the positive experience in a person-centered approach - they indirectly indicate professionally directed communication between the client and the social worker Thus, in theory, a professionally directed conversation between a client and a social worker is of fundamental importance. In the theoretical part of the research, it was found out that the professional functions of a social worker directly include the use of different approaches and methods of social work. The authors also conducted a survey of social workers, finding out whether social workers have acquired the Systemic approach, skills and apply them in practice in working with families with children. Empirical research reveals that currently in Latvia, 28 social workers have mastered the Systematic Approach 360 academic hours and 16 will start their studies. 60% of the surveyed social services use the Systemic approach in psychosocial work with families with children. 20% of the surveyed social services do not use the systemic approach and 20% use it partially. 10% indicated that the systemic approach is not used in psychosocial work with families with children, because the conditions in the social service are not suitable, one social worker performs several duties. Heavy workload. There is insufficient information about the Systemic Approach as an alternative to psychosocial work. Respondents who use the Systemic approach in psychosocial work rate it as useful, with good results. They have their own professional satisfaction, which is an important aspect in reducing the risk of burnout of social workers. When researching alternatives for the gradual introduction of the systemic approach in psychosocial work, the following findings are put forward in the social services of Latvian municipalities: 1. The systemic approach in psychosocial work with families with children has proven and proved to be useful and bearing positive results; The systemic approach to psychosocial work is currently being introduced relatively slowly and unevenly, training is expensive, lack of properly trained social workers, lack of information and understanding, as well as financial and logistical support. Students admit that the professional bachelor's program in social work is very broad, it is determined by the professional standard, however, they would like to get involved in more international programs.

Conclusions

1. In recent years, the interprofessional dynamics of social work with other disciplines has increased in social work. 2. The future of social work and its direction is extremely dependent on ALL students, practitioners, managers, academics, seniors and service users. 3. The results of the study are compared with other international studies available in databases. 4. The findings are also common in other countries. 5. The research proves the diversity of methods and programs used in professional social work.

Recommendations: 1. It is important to work with other professionals, in social work programs try to provide students with unique, innovative interprofessional learning opportunities. 2. Take a position NOW to build your professional identity and ultimately protect the development of social work. 3. To improve the skills of social work students in psychosocial work, counseling, professionally managed communication. 4. More research is needed to improve social work, which would be the basis for the development of social work as a science in Latvia.

Plagiarism Rate = 0 %

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How Health and Hygiene Go Hand in Hand with Education

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Abstract
The wide spread of hygiene promotion and education methods should determine people to think about how serious damage a bad hygiene and poor sanitation can bring (Euronews, 2014), such as serious infections (Tent et al., 2019). School is considered to be an important environment for our children as it's the place that much of our learnt behavior takes root (Vlădescu, 2012). School hygiene education is becoming more and more recognized as a healthcare science, as it has erupted as a smaller form of the wider school health education. (Botea M. et al. 2019) In this direction, it can be regarded as a study of school environment influence upon mental and physical health of students (Meckel, 2013). Hygiene is important for parents too, with the quality of hygiene care in schools gaining a wider audience. The paper is providing a literature review about the hygiene behaviors throughout the world and particularities of school curriculum.
Keywords: hygiene, school, education, worldwide, practices.

Introduction

At a first glance, the immediate aims of school hygiene education are discussed at a larger scale in the direction of spreading useful practices in countries and local communities which are affected by specific development lags in the field of personal, water, food, domestic and public hygiene. Starting from this worldwide concern, international organizations thought, financed and implemented various country projects which, in the end, would have the humble scope of providing water and food supplies and to cope with diverse environmental factors.

It is politically correct to think that every country, at one point in its history, started to conserve the priority of providing quality learning in the education sector in any field of human development. It is just a matter of money, geopolitical situation and cultural pattern in order to realize, as a community leader, that keeping healthy and avoiding illnesses is a serious challenge. Hygiene levels are difficult to maintain if there does not exist provision of adequate facilities in schools.

Everyone would think that health education is at the center of every teachers' daily activity, because the pre-school and the primary / gymnasium school systems should provide an additional support besides the healthy and hygienic notions (Popescu, 2015:15). It is not a wrong idea, as a vast majority of teachers become aware of their role in this area, but it cannot be hidden the fact that the school curriculum is overwhelmed with a great number of prescribed activities from all areas of sciences. As Jourdan (2010:18) remarks, "health education appears to be just one more activity, a further burden to be added to the already heavy load".

But let's look also on the positive side: certain educational and teacher training projects in this area can bring a more "holistic" approach (O'dea, 2012) towards the contribution of teachers in bringing up feelings of strength, motivation and competence among pupils.

The main problem we define here is given by the marginal role of the hygiene education in schools, which despite the fact it has not only a biological / medical science component, it is not rewarded with greater importance as an emergent component of social science and sometimes is disregarded in relation with potential impact it would have on the teaching profession.

As Jourdan (2010:27) says, hygiene "is not a subject, it is more a moving field", so our problem statement is shifting towards the belief that schools should revise their curriculum, their educational content and pedagogical methods which could determine pupils to embrace good hygiene as a prerequisite for an optimal state of health.

Method

The paper is intended to be a literature review, as there aren't affordable research methods to assess the degree of development of hygiene education among schools in an international context. We consider that the empirical material referenced here represents a solid basis, as several texts from different spans of time and diverse geographical locations have been analyzed, in order to cover all the globe and to compare various perspectives and approaches.

We took as a point of reference in our analysis two hygiene education models described in Table 1, which served as a good guidance in understanding the vast opinions transmitted by the referenced authors throughout their writings. It is obvious that it is a common resilience gesture for most authors to appeal to the strategy of change, even if they described the role of static educational interventions on a narrow contextual framework: normally, most of the authors are criticizing traditional educational models and embrace the over-quoted concept of modern educational models, but they forget that planning takes a great amount of time and only in some cases generational shifts can bring an empowerment of the change in mentality towards the overall concept of education and in this particular case, on the emerging route of hygienic conduct.

Table 1. Hygiene education models in schools

		Contextual framework	
Strategy for change		Narrow	Wide
	Top down	Traditional educational models	Planner models
	Bottom up	Modern educational models	Empowerment models

Source: Hagquist et al., 1997:226

Then we have searched for a good definition to start with, but we have agreed upon several terms like hygiene promotion, hygiene education and even the broader concept of school health education, as they were presented by Green et al. (1982:322) in a study developed almost two decades ago. Even if they may sound confusing, there can be made a differentiation between hygiene promotion and education, the first one seeking organizational and economic support (from non-governmental or international organizations) for transmitting voluntary attitudes in a non-formal context and the latter one designing learning experiences in a formal context, like pre-school, primary, gymnasium or high school settlements. In both ways, non-formal and formal cognitive skills can complete each other and can provide the most debated life-long learning topic – for hygiene matters, as stated by Marinescu et al (Marinescu et al. 2018:21)

Findings

Starting from the problem statement mentioned in the introduction section, there were identified several reasons why schools, at a worldwide scale, are able or not to adopt changes in hygiene related curriculum, teaching methods and learning assessments. O'dea (2012:150) has a thorough approach in this matter and identifies several categories of factors which can influence the adoption of hygiene educational interventions in schools: the "mild" category is given by the predisposing factors, which are not so comfortable to work with, because, as we stated before, the traditional targets of education (knowledge, attitudes and beliefs) are not so popular anymore; the "starting" category is given by the enabling factors, which transcends the motivation of pupils to carry out an action and focuses much more on their skills; the "state of the art" category is given by the reinforcing factors which is in accordance with the use of modern teaching methods – we are talking about largely social or peer influence.

This means that teachers should not be limited only to predisposing factors, such as "classrooms or didactic methods, or pupils as the only audience", or to enabling factors like "health problems of childhood and adolescence" (Green et al., 1982:322), because there are many predisposing factors that appear outside of schools, like family, friends and several other peers from different cultural and socio-economic contexts. So, schools cannot be regarded as solely responsible for conditioning good or bad hygiene habits.

So, where is the place of planning in the hygiene educational framework model presented in Table 1? Participatory teaching methods can help; small group activities are also recommended. Positive feedback in the direction teacher – pupil and pupil – pupil can eliminate the constraints of sitting inside a classroom. But in order to allow pupils to practice hygiene, they need to be encouraged to exchange opinions, to develop teamwork capabilities and to further nurture cooperation. Mooijman (2012:27) has further reflected on this issue and came to the discovery that "youth hygiene clubs get schoolchildren actively involved as advocates for a healthy and hygienic school and community, they learn appropriate hygiene behavior and can train as peer educators and as overseers of hygienic conditions in the school and schoolyard".

But where is the empowerment model? Indeed, health education in schools seems to have undergone major changes. Hagquist et al. (1997:230) stated that, in an evolutionary perspective, hygiene promotion has followed "a dominant line […] placing the individual in a social context", parallel to the "constant line" of hygiene education, which had a great influence on school pupils.

But in order to be regarded as a serious activity, hygiene education in school requires support at national/regional level, because in many countries, the curriculum currently does not give much attention to sanitation and hygiene. One of the reasons lies in the fact that hygiene is a topic that works on assumptions related to human behavior, which, in an impact evaluation framework, are difficult to quantify and are not backed up by evidence in numbers, statistics or other tangible indicators – so governments are reluctant to finance mental and emotional aspects related to hygiene issues (Popescu, 2016:23). Other reason relies on the wrong direction of thinking that human behavior is completely based on knowledge and reasoning, and in order to give a realistic image about what hygiene stands for in this matter, we should all reflect on the worldwide people insubordination with COVID-19 social distancing, self-isolation and quarantine measures.

For the educational misalignment problem, Moynihan (2015:9) and (Centers for Disease Control and Prevention, 2019) identified some core competencies for an effective hygiene curriculum, comprising of a mixture of knowledge, attitude and skills. In the next paragraphs, these competencies are described and reflected upon.

- "Hygiene curriculum must be research based and theory driven" (Centers for Disease Control and Prevention, 2019). More than that, Snell et al. (2003) point out the importance of monitoring indicators in health-related educational programs. Such indicators reflect in school-physical environment, in the number of active and organized children, in the number of trained and committed school personnel, in the number of people or parents involved in the decision-making process, in the functioning mode of teachers – parents associations, in the nursery programs and hygiene behavior.
- "Hygiene curriculum should address individual values, attitudes and beliefs, but in an equal manner, should address individual and group norms that support health-enhancing behaviors" (Centers for Disease Control and Prevention, 2019). Barnekow et al. (2006) stress out the effectiveness of the participatory research methods embraced by schools which adhere to hygiene-promoting principles – relevant case studies were described in countries like Cyprus, Ireland, Finland, Denmark, Netherlands, Czech Republic, Ukraine, Switzerland, Sweden, Spain, Slovenia, Scotland, Portugal, Poland, Iceland, Greece, Germany, Croatia, Estonia, Latvia and Lithuania.
- "An effective curriculum should focus on reinforcing protective factors and increasing perceptions of personal risk and harmfulness of engaging in specific unhealthy practices and behaviors" (Centers for Disease Control and Prevention, 2019). Vu (2012:4) presents the case of United States of America, where public health education policies are a critical aspect of comprehensive school health programs. However, although there was implemented a consistent support by the federal government to promote and fund school health and hygiene education initiatives in the past 50 years, "many young adults graduate high school with inadequate health knowledge and skills" (Kann et al., 2007).
- "Hygiene must address social pressures and influences" (Centers for Disease Control and Prevention, 2019) – a focused research on this direction was made by Tayler et al. (2020) which described all the necessary steps, from

the phase of sanitation standards and norms compliance, through the planning, designing and implementing hygiene facilities and promoting hygiene education in Mongolia.

- "Hygiene and health education build personal competence, social competence and self-efficacy by addressing skills" (Centers for Disease Control and Prevention, 2019). In this aspect, Schall (1994) mentions that school curriculums must avoid having links with political interests other than those of the targeted population, must avoid an over-excessive technical character and should exclude historical inertia (outdated information).

An efficient curriculum should use strategies designed to personalize information and engage students. Mooijman (2015) developed such a manual for Sri Lanka schools, which gives lesson plans for teachers and is intended to stimulate discussions and creative thinking among students.

- Nevertheless, an efficient curriculum "must provide adequate time for instruction and learning" (Centers for Disease Control and Prevention, 2019). A manual developed by Nepal RCS and UNICEF (2006) begins with the premise that more children ever before are attending schools for longer periods of their life, so schools play a great role for child survival, protection and development.

- "Hygiene education should provide functional health knowledge that is basic, accurate, and directly contributes to health-promoting decisions and behaviors" (Centers for Disease Control and Prevention, 2019). Pradhan et al. (2019) emphasize that various school-based interventional studies have generated enhancements in personal hygiene among school children in Pakistan. In the same note, Rahman (2016) urges the need of adopting healthy practices among schools in Bangladesh.

- "Hygiene and health curriculum must provide age-appropriate and developmentally-appropriate information, learning strategies, teaching methods and materials" (Centers for Disease Control and Prevention, 2019). Wong et al. (2010) show an interesting program which was developed by John A. Burns School of Medicine and the State of Hawai'i Department of Education, which allowed premedical and medical students to act as health educators for high school pupils. The program concluded with the idea that the pupils were mere comfortable and willing to learn on health and hygiene topics in the presence of students, rather than in the presence of their high school teachers.

- "Hygiene education strategies should incorporate learning strategies, teaching methods and materials that are culturally inclusive" (Centers for Disease Control and Prevention, 2019). Snel et al. (2002) demonstrated that such a program (School Sanitation and Water towards Health and Hygiene) was successfully undertaken in India, and several educational materials were adapted to the local culture. Similar findings were described by Antwi-Agyei et al. (2017) regarding the Tanzania Sanitation campaign for schools. Snel (2004) also presented similar campaigns which needed to be culturally inclusive in Kenya (school health clubs), Uganda, Burkina Faso, Kenya (gender sensitivity with reference to water, sanitation and health education), Nepal, Bangladesh, India, Colombia. Also, the United Nations Children's Funds (1998) has been long supported the curriculum change and development of teaching aids depending on the country the intervention where hygiene and education was needed.

- "School curriculums should provide opportunities to reinforce skills and positive health behaviors. Also, curriculums should provide opportunities to make positive connections with influential others." (Centers for Disease Control and Prevention, 2019). Lee et al. (2019) demonstrate that healthy school policies show significant correlation with different aspects of student health, but there is insufficient information in order to tell why programs work in some schools and not in others.

- "Health curriculum must include adequate teacher information and plans for professional development and training that enhance effectiveness of instruction and student learning" (Centers for Disease Control and Prevention, 2019). White (2013:520) states that, in most countries, the Master of Health Sciences represents the most common professional entry level qualification for the role of health teacher, instructor or educator.

Results, Conclusions and Recommendations

As Jourdan (2010:40) affirms, there is a wrong input in questioning if schools are really promoting school hygiene or not. A good point stands for assuming that this objective is really done and moving forward, critical thinking should be developed only in relation with the validation or invalidation of the hypothesis that schools actually bring a positive change in tackling hygiene misconduct all over the world.

Hygiene promotion and education are interrelated. This is done by promoting hygiene not only in the school curricula, but also in public policies and academic debates, as well as in the local policy making and community activities, services and resources (O'dea, 2012:156). Of the three sets of factors, those that reinforce (reward or punish) hygiene behavior are likely to be the most influential (Green et al., 1982:331).

We have to anticipate that modern educational paradigms will change according to the "societal dynamic globalization, innovative pedagogy and learning styles, and knowledge society" (Hussain et al., 2015:27).

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Plagiarism Rate = 0%

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The Effects of Creative Drama Education on Problem-Solving and Emotion Regulation Skills of The Kindergarten Students

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Abstract
The aim of the study is to determine the effects of creative drama method on emotion regulation skills of the kindergarten students. The study was conducted with a total of 40 students, 20 boys and 20 girls, aged 4-5, studying in the X Kindergarten in the first semester of the 2018-2019 academic years in Milas, Mugla/Turkey. Creative drama activities, which were thought to provide students with emotion regulation skills, were implemented three times a week during 6 weeks period. Emotion Regulation Scale were used to collect data. Mann Whitney U Test was used to determine whether there were significant differences in terms of variables in the analysis of the data. According to the hypotheses of the study, it was determined that there was a significant difference in favor of the experimental group in the pretest-posttest emotion regulation levels of the students in the experimental and control groups. According to these results, it can be said that creative drama education has an effect on emotion regulation of kindergarten students.
Keywords: Emotion regulation, kindergarten education, creative drama, problem solving

Introduction

The stages of physical, mental, social and emotional change that the organism passes from fertilization to death are explained as development (Hasırcı et al., 2009). Growth and development is a dynamic phase from the beginning to the end of life. Development has mental, physical, social and emotional aspects. These aspects constantly affect each other (Bilgin, 2007b). The first six years of life are the fastest and most effective years of growth and development and the most intense interaction with the environment we live in (Türkoğlu & Uslu, 2016).

Social and emotional development of a person starts from the moment of birth. Many skills such as gaining self-expression, communicating with his environment, learning social rules and values and awareness of his thoughts, including being born with crying, are the steps of social emotional development. One of the sources of social emotional development is the people around the person as the person grows; the factors increase and his abilities improve. Early childhood is a critical period in this development.

Social relations have an important role in modern social structure, because people spend a significant part of their lives interacting with others. Therefore, it can be stated that people with high social skills can interact more easily with others in the society. Social skills acquired during childhood play an important role in establishing effective social relations with others in later life. In addition, the social skills provided during childhood affect the social adaptation process of the person in adulthood positively (Kabasakal & Çelik, 2010).

When we consider the importance of the early childhood period, the importance of using creative drama, which is a structured teaching technique by doing and experiencing, increases in order to support social emotional development. Creative drama supports many skill developments compared to traditional teaching methods. Development can be supported with creative drama. Gaining social skills can become permanent through activities learned by doing and experiencing. Creative drama education can be used both as a teaching method and as a learning tool. Creative drama consists of three steps: warm-up-relaxation, animation and evaluation. While the games in the warm-up stage develop creativity in a free environment, they positively affect language improvement. The fact that the animations are not based on the text affects the way they enter life, find alternative solutions to problems in an environment where they feel safe and comfortable, question their environment, use their mind and emotions and socialize unlike the teaching approaches that lead to memorization, punishment, restriction or listener position.

The effects of creative drama activities in terms of improving social emotional skills can be listed as being patient, cooperation, positive self-design, creativity, self-control, feeling of confidence, revealing the feelings and ideas of themselves and others, being aware of their surroundings, waiting their turn, making friends, being kind, understanding the reasons for their own and others' attitudes, obeying the rules, sharing, communicating with people they know, helping each other, dealing with social problems, and taking responsibility (Gültekin, 2014). Since the drama activities are carried out within the scope of a cluster work, they give the student an opportunity to socialize. During the drama activities, the student communicates with others and transfers his feelings and thoughts, and improves his empathy skills by putting himself in their shoes. Social interaction of a student who discusses his thoughts with his friends can be strengthened (Erkoca-Akköse, 2008).

In early childhood, the student acquires many positive behaviors such as sharing, cooperation, tolerance, helping each other, self-control, self-esteem, self-confidence, creative thinking, critical thinking and taking responsibility. There should be game-based learning processes to facilitate learning in early childhood. A healthy development should be ensured by establishing non-restrictive communication with an appropriate educational environment. While regulating emotions, following different strategies in dealing with negative emotions ensures that solid stones are placed for the basis of psychological well-being that increases the quality of human life.

Children who do not receive social skills training in preschool period, but who have social skills problems face many mental and physical problems in the future. It supports the view that behavioral problems that occur in the early stages of life lead to psychological problems in the later periods (Topaloğlu, 2013).

Since preschool education supports child development in many ways, the importance given to preschool education has increased in recent years, the number of scientific studies dealing with the effects of educational programs on children's development has also increased, and studies dealing with the effects of different teaching methods on child development in preschool have become popular. On the other hand, it has been observed that the studies on the benefits of preschool education in developing social skills and emotion regulation skills of preschool children are limited in the literature. As a result of the literature review, it was concluded that studies examining the effects of drama activities on social skills and emotion regulation skills in the preschool period are quite limited. Therefore, this research has been evaluated as a study that will contribute to the literature. Since creative drama education, which has a positive impact on all developmental areas, contributes to the social-emotional development of children in early childhood, this study was requested to reach more children with creative drama.The problem sentence of the study conducted in this direction was determined as "Does creative drama education has an effect on emotion regulation and social problem solving skills of preschool children?" The problem statement of the research was tested with the hypotheses given below.

1. The emotion regulation skill level of children who receive preschool education with creative drama is higher than the emotion regulation skill level of children who do not receive creative drama education.
2. The social problem solving skill level of children who receive preschool education with creative drama is higher than the social problem solving level of children who do not receive creative drama education.

2. METHOD

Research model, working group, data collection tools, data analysis are explained under this heading.

2.1. Research Model

It was decided to organize the research according to the experimental design with pretest posttest control group, since the effects of creative drama on the social problem solving and emotion regulation skill levels of children who received preschool education and those who did not were investigated. In the experimental design with pretest-posttest control group, two groups are randomly formed from the previously determined sample pool. The experimental group of the research consists of a total of 20 children, 10 girls and 10 boys (n = 20), who are educated with creative drama. In the study, it was aimed to determine the effects of creative drama supported activities on social problem solving and emotion regulation levels.

2.2. Working Group

The population of this study is composed of children studying in kindergartens in Milas district of Mugla province. The sample group of the study consisted of a total of 40 students, 20 boys and 20 girls aged 4-5, studying in the X Kindergarten, which is accessible and allows the study to be carried out, in the first semester of the 2018-2019 academic year. For the experimental process, the experimental and control groups were randomly chosen from the X Kindergarten. Individuals, whose samples are formed with the random assignment, are assigned to the experimental and comparison groups randomly (Büyüköztürk, et al, 2011).

2.3. Data collection tools

While collecting data for the purpose of this study, Wally Social Problem Solving Test, derived from the combination of Spivak and Shure's (1985) Preschool Problem Solving Test and Rubin and Krasnor's (1986) Child Social Problem Solving Test and Turkish validity and reliability studies according to Turkish culture conducted by Gökhan Kayılı (2015), was used to examine children's social problem-solving development and Emotion Regulation Scale which was developed by Shields and Cicchetti in 1997 and was adapted into Turkish by Altan in 2006, was used to examine the development of emotion regulation skills.

2.3.1. Wally Social Problem Solving Test

In order to evaluate the social problem solving skills of the children included in the study group, Wally Social Problem Solving Test was derived from the combination of Spivak and Shure (1985) Preschool Problem Solving Test and Rubin and Krasnor (1986) Child Social Problem Solving Test. The test was organized at the University of Washington Nursing, Parenting Clinic as part of the "Incredible Years" project conducted by Carolyn Webster-Stratton (WebsterStratton, 1990; Webster-Stratton, Reid & Beauchaine, 2013). In the test, social problem-solving skills are measured by evaluating the reactions of children in conflict situations arising from relationships between hypothetical individuals.
The test consists of two different forms prepared for boys and girls. There are 15 pictures in both forms that can be conflict or problems in interpersonal relationships. In the form for boys, the hypothetical child is male; in the form for girls, the hypothetical child is portrayed as a girl. 15 pictures describing possible situations are shown to the child in order, and after each picture, the child is asked what he can do or say to solve the problem when they encounter a problem as in the picture. In the Wally Social Problem Solving Test, the possible situations presented to the child include 15 situations covering 11 categories. These themes are consist of how to deal with rejection, making mistakes, unfair treatment, victimization, prohibition, loneliness, being deceived, frustration, being in a dilemma, not being approved by an adult, being attacked (Dereli, 2008). The suitability and the appropriateness of the pictures of the test to children rose according to Turkish culture, aged 3-5, and Turkish validity and reliability studies were carried out by Gökhan Kayılı (2015).

Table 2.1. 15 Possible Problem Situations Presented with Pictures to Children in Test

Theme Content	Main theme
1.Rejection when want to play with a friend	Rejection
2. Damaging an item that his/her mother values	Making mistakes
3. Parental punishment of the child for making fun of his/her sibling in response after he/she taunted him/her	Unfair treatment
4. Being mocked by classmate	Victimization
5.Not being bought his/her favorite toy by a parent	Prohibition
6. Damage to the clothes that the parent bought for him/her	Making mistakes
7. Teasing for playing with babies	Victimization
8. Loneliness and the ability to join the game group	Loneliness
9. The food he/she has saved for later eating is eaten by his/her friend without permission	Being deceived
10.Breaking of the modal toy by his/her friend which he/she tried to make for a long time	Frustration
11. Both his/her brother and he/she want to eat when there is only one slice of pizza left	Being in a dilemma
12. Getting the teacher angry when he/she's late from the playground to the classroom	Not being approved by an adult
13. Being attacked by a child younger than him/her	Being attacked
14. Asking for the friend’s bike when want to ride it	Victimization
15.Meeting a new friend	Loneliness

Each answer given by the child is coded by comparing it with the solution strategies in the Wally Social Problem Solving Test Prosocial and Agonistic Categories, and the answers are recorded. Recorded answers are scored according to the positive (P), negative (N) and not scored (blank) results in the scoring table of the test. The behaviors the child says are grouped as prosocial and non-prosocial. Every prosocial response given by the child is evaluated as positive, every antisocial response given by the child is negative, and situations where the child does not respond are evaluated as not scored. 1 point is given for each prosocial behavior and 0 points for non-prosocial behavior. The highest score that can be obtained from the scale is fifteen (15) and the lowest score is zero (0).
Kaiser-Meyer-Olkin (KMO) coefficient and Bartlett Sphericity coefficient value were calculated as .814 by Kayili (2015), using the exploratory factor analysis technique for the construct validity of the Wally Social Problem Solving Test. In social sciences research, the fact that the KMO coefficient value is greater than .60 indicates that the sample size is suitable and sufficient for factor analysis. Bartlett Sphericity Test for Wally Social Problem Solving Test was found to be significant in the study (X2 = 1164.354; p <01). It shows that the data are suitable for factor analysis. The Kuder Richardson-20 (KR-20) formula was used to calculate the internal consistency reliability of the Wally Social Problem Solving Test. The reliability coefficient of the Wally Social Problem Solving Test was calculated as .72 (n = 50) for three-year-olds, .79 (n = 145) for four-year-olds, and .81 (n = 504) for five-year-olds. Considering that the reliability coefficient of .70 and higher for a psychological test is generally accepted as sufficient for the reliability of the test scores, the high KR-20 reliability coefficient values indicate that the test is reliable. The 1st and 2nd consistency rates in measurement of Wally Social Problem Solving Test participants who participated in the test-retest reliability of the study were the lowest .66 and the highest .93. The average consistency rate of the participants was calculated as .77. Obtained data show that the test-retest reliability of the Wally Social Problem Solving Test is sufficient.

2.3.2. Emotion Regulation Scale for Preschool children

Emotion Regulation Scale was developed by Shields and Cicchetti (1997). The scale can be filled in by both mothers and teachers of preschool children. Preschool scale consists of 24 items in total and is evaluated in 4-point Likert type (1-never / rarely, 4-always). The scale includes two subscales. These subscales are Lability-Negativity and Emotion Regulation.
The Lability-Negativity subscale is comprised of items representing lack of flexibility, mood lability and dysregulated negative affect (Öztürk: 2018). Emotion Regulation Scale developed by Shields and Cicchetti in 1997 was adapted into Turkish by Altan in 2006. In the Lability-Negativity subscale of the Emotion Regulation Scale, which consists of 24 items in total, there are 15 items (items 2nd, 4th, 5th, 6th, 8th, 9th, 10th, 11th, 13th, 14th, 17th, 19th, 20th, 22nd and 24th) for anger control, mood lability, lack of flexibility and dysregulated negative affect.
The Emotion Regulation subscale includes items describing situationally appropriate affective displays, empathy, and emotional self-awareness. In the Emotion Regulation subscale, there are 9 items (items 1st, 3rd, 7th, 12th, 15th, 16th, 18th, 21st, and 23rd) for empathy, emotional self-awareness, appropriate developmental behavior and appropriate affective displays. It is a Likert-type scale with four answer options for each item. In the evaluation of the scale, options are evaluated by using points from 1 to 4. Scoring of the scale is as follows: “Never / rarely” 1 point, “Sometimes” 2 points, “Often” 3 points and “Almost always” 4 points.
In the original scale, Shields and Cicchetti (1997) found Cronbach’s alpha internal consistency coefficient as .96 for Lability/Negativity subscale and .83 for Emotion Regulation subscale. Since the Emotion Regulation Scale consists of two subscales that contain only positive and negative expressions, the subscales are evaluated among themselves instead of the total score. It is also handled with two dimensions that exist in the studies conducted by Ulusoy (2018) and Sille (2016), in which this scale is used. Altan (2006) determined the internal consistency coefficient for the overall scale for the 4-6 age groups as .75 for the mother form and .84 for the teacher form. Cronbach’s alpha internal consistency coefficient for the mother form was found to be .73 by Batum and Yağmurlu (2007) and .75 by Yağmurlu and Altan (2010) (Ulusoy: 2018, 28). With the studies conducted, it was concluded that the scale has high level of reliability and distinctive validity in the adaptation of the scale to Turkish.

2.4. Procedures
In the period following the week of the pretest application, research-related applications were started for the experimental and control groups. While the MEB (Minister of National Education) preschool education program

in the experimental group was continuing, it was determined three days a week for the implementation of creative drama activities and a total of 18 creative drama activities were applied by the experimental group kindergarten teacher, three times a week for 6 weeks on the specified days. The kindergarten teacher of the control group continued to apply the MEB preschool education program, which was present in the application process, without any intervention, and did not apply any additional application or creative drama activity outside the program in this process. After the six-week application process, Wally Social Problem Solving and Emotion Regulation scale was applied as a post-test to all experimental and control groups in order to determine the development of social problem solving and emotion regulation skills.

2.5. Data Analysis

All analyzes were made in the SPSS 22.0 program in order to analyze the data. In the study, the effects of independent variables on dependent variables were examined. The Mann Whitney U test was used to compare the pretest and posttest Social Problem Solving scores, Lability/Negativity scores and Emotion Regulation scores of the experimental and control groups. The Mann-Whitney U Test analyzes whether the scores obtained from two independent samples differ significantly from each other (Büyüköztürk, 2009).

3. Findings

3.1. Findings on the first hypothesis

Regarding the first hypothesis of the study, the Mann Whitney U Test was applied to compare the emotion regulation skill levels of children who received preschool education with creative drama and those who only received a MEB (2013) preschool education program without creative drama. The data obtained from the comparison are presented in Table 3.1.

Table 1. The Mann Whitney U Test Values Regarding Emotion Regulation Scale Post-Test Scores of Experimental and Control Groups.

	Groups	**N**	**Average**	**Total**	**U**	**p**
Lability/Negativity	Experimental	20	19,15	383,0	173,0	,478
	Control	20	21,85	437,0		
Emotion Regulation	Experimental	20	28,35	567,0	43,0	,000*
	Control	20	12,65	253,0		

* p<0,05

When the values of the Mann Whitney U test, in which the negativity and emotion regulation skill levels of the students who received and did not receive preschool education with creative drama in Table 1 were compared; There is no statistically significant difference between the groups in lability/negativity (U = 173.0; p> 0.05) levels, but there is a statistically significant difference in emotion regulation (U = 43.0; p <0.05) in favor of the experimental group.

3.2. Findings on the second hypothesis

The second hypothesis of the study was “The social problem solving skill level of children who receive preschool education with creative drama is higher than the social problem solving level of children who do not receive creative drama education.”

Regarding the second hypothesis of the study, the Mann Whitney U Test was applied to compare the social problem-solving skill levels of children who received preschool education with creative drama and those who only received a MEB (2013) preschool education program without creative drama. The data obtained from the comparison are presented in Table 2.

Table 1. The Mann Whitney U Test Values Regarding Social Problem Solving Post-Test Scores of Experimental and Control Groups

	Groups	**N**	**Average**	**Total**	**U**	**p**
Social Problem Solving	Experimental	20	29,70	594,0	16,0	,000*
	Control	20	11,30	226,0		

* p<0,05

Analyzing the values of the Mann Whitney U test, which compares the social problem solving skill levels of creative drama in Table 3.2 with students who received and did not receive preschool education; there is a statistically significant difference in the social problem solving ($U = 16.0$; $p < 0.05$) levels in favor of the experimental group.

4. Results

According to the results obtained within the scope of the first hypothesis of the study in which the emotion regulation skill levels of children who received creative drama and those who did not receive were compared; the emotion regulation skill level showed a significant improvement in favor of the experimental group that received education with creative drama. In addition, in the lability/negativity subscale, which is the subscale of emotion regulation skill, it was observed that there was no difference in emotion regulation skill level between the two groups. According to the results obtained within the scope of the first hypothesis of the study in which the social problem solving skill levels of children who received creative drama and those who did not receive were compared; the level of social problem solving skill showed a significant improvement in favor of the experimental group that received education with creative drama.

5. Discussion and Recommendations

It seems that the research supports the first hypothesis which established as “The emotion regulation skill level of children who receive preschool education with creative drama is higher than the emotion regulation skill level of children who do not receive education with creative drama.” According to this result, it can be said that participation in creative drama education improves emotion regulation skills in preschool children. In the research conducted by Ilgaz (2014) which was found that children who participated in 6-stage support and evaluation activities after the educational drama applications learned the emotional state concepts (happy, scared, confused, sad, angry), is aimed to determine the level of success between children who only participated in drama games and those who did not participate in drama games. At the end of the study, it was stated that creative drama activities applied to children contributed to their learning about emotion-related concepts.

It is seen that the second hypothesis "The social problem solving skill level of children who receive preschool education with creative drama is higher than the social problem solving level of children who do not receive creative drama education.” is supported, in other words, the findings support the second hypothesis of the research. In the study conducted by Catterall (2007), it was aimed to examine the effect of drama activities on the ability to solve problems and conflicts between peers, the children participating in the study were divided into two groups as experimental and control groups, the children in the control group were not included in the drama activity, the children in the experimental group were participated in a drama activity program for 24 weeks which was prepared in accordance with the purpose of resolving conflicts between peers. During the drama activity, children were taught the reasons that catch out peer conflicts, they were taught to evaluate the possible results of peer conflicts, and the children were informed about the ways of resolving conflicts. At the end of the study, it was emphasized that when compared with the children in the control group, significant improvements occurred in the interpersonal problem-solving skills, group working styles, thinking attitudes and processes of children participating in drama activities.

In order to develop interpersonal social problem solving skills, it may be suggested that children participate in creative drama and other activities that support social skill development in the preschool period. Since the development of children's skills of understanding and expressing their emotions, building empathy by understanding other people's emotions in their development process will form the basis for a healthy psycho-social development, ensuring that they participate in creative drama activities that support emotional development in the preschool period will support their emotional development, thus their emotion regulation skills. In this context, it may be suggested that teachers direct children to emotion regulation activities that support emotional development. Considering that the creative drama activities applied in addition to the existing curriculum improve the emotion regulation and social problem solving skills of children in the preschool period, it can be recommended to implement creative drama-based and supported activities for children in addition to the existing education program in preschool education institutions. In the light of the literature, it can be said that the contents of creative drama activities applied to preschool children and the duration of the activities can affect emotion regulation skills and social problem solving skills at different levels. At this point, new studies can be conducted on the effects of creative drama activities with different duration and content on the emotion regulation and social problem solving skills of preschool children. In this context, longer-term activities can be applied and their effects can be examined. In addition to the social and emotional characteristics of preschool children, many other developmental features are rapidly shaped, and the preschool education program implemented supports the specified developmental characteristics of the children. In this study, although the development in social problem solving skills and emotion regulation skills were discussed separately, it should be considered that development is a whole, and in this context, one development area affects the other development area. In this context, the relationship between social problem solving skill and emotion regulation skill can be examined after creative drama activities in new studies.

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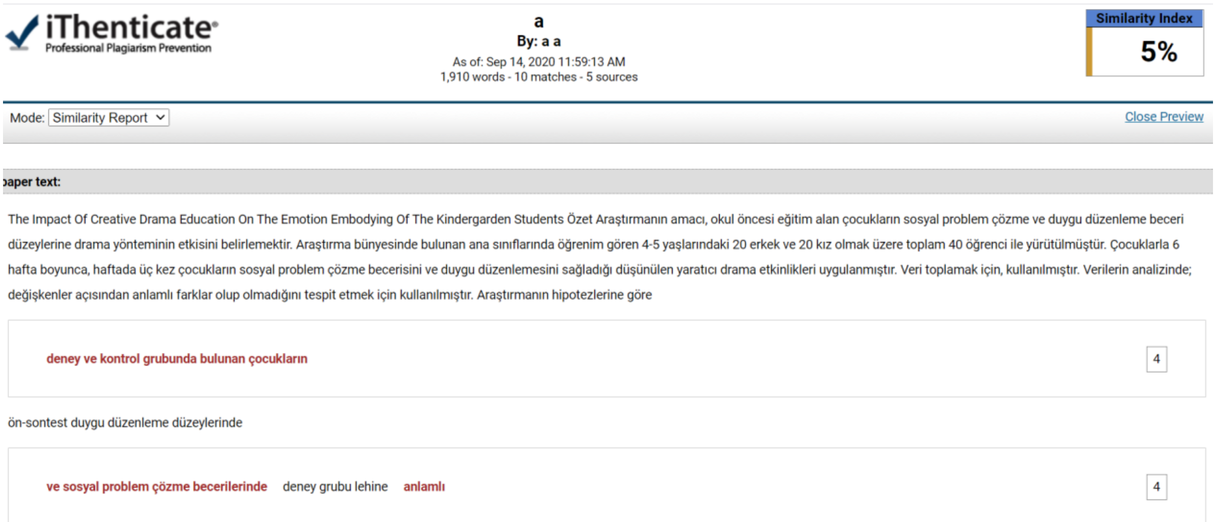

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Factors Determining the Choice of the Teacher's Career among the Applicants of Pre-service Teacher Education Programmes

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Abstract

A report of the European Commission (201t) states that a teacher's career has lost the capacity to attract the most promising future professionals. As the teaching profession is no longer as attractive as before, Latvia is already experiencing a serious shortage of qualified teachers, and in turn, the declining prestige of this profession is having a negative impact on the enrolment of highly qualified candidates in teacher education programmes.

The aim of the present article is to identify the factors determining the choice of the teacher's career among the applicants of pre-service teacher education programmes. The main emphasis and research question in relation to career activities is based on the development of the concept of "career readiness". Therefore, the content of applicants' answers to entrance examination questions received for the last three years have been explored. The criteria for the analysis are based on the subjective and objective career factors, often mentioned words in their goals and features in describing their suitability for the profession.

The research findings give the evidence that a majority of teacher education programme applicants choose their future career based on the subjective career factors (values, job stability, challenges, work-life balance, goal fulfilment, etc.), however in the society they are judged by objective career factors (promotion, salary, economic situation, etc.) and the lack of congruence between them might make teachers leave their profession. Besides the factors influencing and shaping professional development of pre-service teacher career have been explored and suggestions for the improvement of the admission and study process in pre-service teacher education programmes are put forward.

Key words: Entrance Examination, Pre-service Teacher Education Programmes, Teacher's Career, Attractiveness

Introduction

Changes in education bring changes to teachers and their careers. Consequently, a high-quality and engaging (attractive) teaching career is a prerequisite for a good education. It is important to recognize the crucial role of teachers for the quality of school education. As a cornerstone of the school learning process and the new reform, teachers are also an educational policy priority that has received support at European level. European Commission (2017) emphasizes the need to improve teacher education, continuous professional development and raise the status of the teaching profession.

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The perception of teacher's profession in society has changed. It reveals new career perspectives, continuous self-improvement, co-operation with colleagues, personal responsibility for one's decisions, the ability to take risks, etc. The teaching profession becomes more dynamic, creative and complex and promotes motivation to become and remain a teacher (Heijnen 2018).

Choosing a profession and entering the labour market is a process of learning and development where the participants themselves must be actively involved, constantly taking individual responsibility for the development of their careers (Baltic Institute of Social Sciences and Organization Development Academy 2015).

However, despite these positive trends, it is still difficult to attract new candidates to teaching profession. There are mentioned various reasons: lack of career prospects, relatively low salary, high workload. Sometimes pedagogy is considered as a "trap" or a "mission" – once having entered it, it is not possible to leave it and switch to another profession (Heijnen 2018, Lāce 2014).

There are also heard provocative statements in society that pedagogy is chosen by those who are unable to study something else (LIZDA 2016), that outstanding pedagogical work is not particularly valued or that the teaching profession has become a consumer good. Anyone who pays for studies in teacher education programmes can become a teacher which ends in graduates who choose to work in another field.

Thus, the questions arise both about the organization process of the selection of applicants, focusing on how to attract better educated candidates to teaching profession, and about the organization of the higher education process, which not only provides the necessary knowledge and skills in terms of relevant qualifications, but also facilitates the development of abilities, attitudes and habits appropriate to individual needs.

The need to attract better educated candidates to the teaching profession is growing day by day, especially in the context of the new education reform towards competence-oriented teaching and learning in Latvia. It is therefore important that there are enough high-quality applicants in teacher education programmes and that it is possible to select suitable candidates for a teaching career during the admission process.

This specific study examines the process of selecting applicants to identify the factors that determine a teacher's career choice and how this choice relates to subjective career factors (values, job stability, challenges, work-life balance, achievement of goals, etc.) and objective career factors (promotion opportunities, salary prospects, economic situation, etc.). The Faculty of Education, Psychology and Art, University of Latvia has got the experience of organizing the entrance examinations in pre-service teacher education programmes for four years. The article deals with a part of a larger scale action research to explore the factors influencing and shaping professional development of pre-service teacher career and improve the admission process of pre-service teacher education programmes, as well as the study process. The review of career theories reveals the process of career choice and development, which helps to understand an individual's career choices and career decisions. They are applicable to different groups, cultures and different socio-economic contexts, and provide a multifaceted focus on the interpretation of career choice data.

Theoretical Background of Career Development and Choice

Significant changes have taken place in the labour market, forcing people to reassess and adjust their career development and choice. These changes are characterized by the employee's self-responsibility (taking responsibility for himself/ herself) for the development of their career (Janasz, Forret 2008; Colmen 2012; Fidler 2016; Maier, 2018). The understanding that the job may not be guaranteed and long-term (Kuijpers, Schyns, Scheerens 2006; International Labour Organization 2016; Davidson 2020) requires employees to continue learning and become competitive. The employees themselves are also responsible for their entry into the labour market, job mobility, self-presentation, as well as there is a free opportunity to move from one employer to another, there is the so-called "career without borders" (McDonald, Hite 2008; Matulcikova & Brevenikova 2014).

Today, career development is influenced by an individual's subjective career perception, which is expressed by the concept of "subjective career". If the term "objective career" means promotion, salary, number of certificates, length of service, i.e., factors that are objectively visible and measurable, then "subjective career" means an individual's reaction to his or her career (Judge et al. 1994; Heslin 2005; Ozolina-Pese 2013; Liangtie, Fuhui 2016). The success factors of subjective career are personal values, such as job stability or challenges. Subjective career success is determined not only by measurable, but also personal criteria, which can be – the balance between work and life, achievement of goals, etc. (Ozolina-Pese 2013; Dyke & Duxbury 2011; Shockley, Ureksoy, Rodopman, Poteat & Dullaghan 2015).

The objective criteria of career success (salary and promotion) do not always determine whether a person feels satisfied with one's career, because they do not expect only promotion or salary from work. Objective criteria are influenced by the economic situation, when, for example, in crisis many people lose their jobs or their wages are reduced, but this does not mean a decline in the subjective sense of career success (Heslin 2003). So, the sources of success can be not only salary or position, but also other ones: the satisfaction with the work done, the opportunity to combine work with family, the opportunity to realize one's talents, etc.

Thus, when choosing their career, prospective students (applicants) in a way reveal their preferences for an objective or subjective career (Gu & Su 2016).

In turn, the identification of factors influencing career choice and making career decisions based on the concept of "career readiness", is facilitated by the study of career theories.

Career choice and its development can be explained by *Trait-and-Factor Theory*, the basic elements of which are: self-awareness, awareness of profession and decision-making skills (Spenser, Haris-Bowlsbey 2012). More broadly, it can be interpreted as "person – environment fit" which deals with relationship between a person's physical abilities, education/ achievement, intelligence, special talents, interests, self-belief, and circumstances (Rounds, & Tracey 1990; Rayman & Gottfredson 2020). *Career Development Theory* (Ginzberg et.al. 1951; Patton, McMahon 2014) considers career choice as a process of finding a compromise between what one wants to be and what is possible.

The *Theory of Professional Choice* (Super, Thompson, Lindeman, Jordaan, Lindeman, Myers 1988) defines 4 stages of career development: *Exploration, Establishment, Maintenance, Decline*. Super, Savickas, Super (1996) point at the cycles of development tasks and their repetition in various ways throughout life. This is an important aspect, as not only young people having obtained secondary education enrol in teacher education programmes, but also people with higher education in science or humanities, teachers of all ages who want to requalify or pursue further education and aim to advance their careers both horizontally and vertically. So, career development is not a one-way and linear process.

In connection with the choice of profession, Vroom (1964) created the *Expectancy Model* – belief that increased effort will lead to increased performance, i.e., if one works harder, he/ she will be better. It is important to decide in favour of a higher result.

The *Social Learning Theory of Career Choice and Counseling* (Krumboltz 1996) substantiates the notion that career decisions are made based on social learning or environmental conditions and events, genetic heritage and learning, work experience. Professional growth is the result of learning and imitating other people's behavior. This theory substantiates the relationship between career choice and decision making.

Understanding the development of these theories, it can be stated that career development does not only mean profession, but person's changing life context and personality. Environmental conditions, their limitations and opportunities, connections with other people, different responsibilities influence and determine the choice of profession. It can be said that career development and personality development converge in choosing a profession (Wolf, Kolb 1980).

However, recent research shows declining correlation between personality traits and occupation, life stage and career stage (Drodge 2002, Pryor & Bright 2003). There is a discrepancy between theory and practice (Di Fabio, Esbroeck

2016) because many professions, including teacher's profession, require constant change, which does not allow to create a certain characterization of the work environment, i.e., the pandemic COVID 2019 situation. It has given the floor for the development of research into the *Chaos Theory of Career* (Drodge 2002, Pryor & Bright 2003) which is based on two assumptions – nonlinearity and recursion.

Based on career development as a process that takes place in a variety of, not always predictable, conditions Savickas (2013) has introduced the term "*life planning*" and talks about life planning in the career construction process. He outlines the term "life planning" as the third paradigm after professional career guidance and education (Savickas 2015), where these three paradigms move from test results essential in career guidance to stages in career education and further to stories in life planning. "Life planning" is much broader and deeper concept than "career construction", so in this study, in order to understand applicants' choice and the readiness for teaching profession in broader context, entrance examinations consisted of questions that allowed to reveal the discourse of their life planning story, interpersonal relationships, experience, emotional attitude, assumptions, and clichés.

Thus, the choice of the profession being a logical part of life planning is a dynamic, self-organizing process that involves the individual, the environment, interaction and change. Bauman (2001) outlines the uncertainty of individual's choice as to whether the chosen path will lead to the expected results, whether today's losses will turn into future benefits, or the rejection of options that seem undesirable right now does not hide painful losses in future. It is not clear who and what can be trusted, as it is not evident who controls the overall course of events – there is no guarantee that everything will go in the expected direction. Living in a state of insecurity is a life of risk, and the person who makes the decision is forced to pay for the risk.

Research methodology

As it has been mentioned above, the Faculty of Education, Psychology and Art, University of Latvia (FEPA, UL) has got the experience of organizing the entrance examinations in pre-service teacher education programmes for four years. The research data analysed in the article contribute to a larger scale action research which aims to explore the factors influencing and shaping professional development of pre-service teacher career and improve the admission and study process in pre-service teacher education programmes. The aim of the present article is to identify the factors determining the choice of the teacher's career among the applicants of pre-service teacher education programme "Teacher" where graduates obtain professional bachelor's degree in education sciences, qualification of a teacher and competence to teach the content of the chosen school subjects at the general, optimal and higher level according to the National Standard for General Secondary Education. Every year the entrance examination for the enrollment in teacher education programme "Teacher" is passed by 270 – 320 applicants, so far 1100. Most applicants (75%) are graduates of general secondary education and secondary vocational education establishments who have acquired secondary education. 10% of applicants are already holding a university degree, 15% have got some higher education experience, but they are not satisfied with their previous choice and choices therefore they are changing the programme to get teacher's qualification. Based on the data analysis of four years, 17% of applicants that have passed the entrance examinations have not enrolled to study in teacher education programme. There have been about ten applicants in four years that have not received minimum points in the entrance examination to qualify for the enrollment in the programme.

The average age of applicants is 19 or 20 years, but there are also 20% of applicants over 30 years and 5 % are older than 40, on average male applicants are older than female applicants.

Due to the transformations taking place in teacher education organization and provision and initiatives on state level during the last three years, the research focus of this article has been narrowed down to the applicants of five subject teacher qualifications (due to the reason they have been open for enrolment all three years) namely: Latvian Language and Literature Teacher, English Language Teacher, Design and Technology (used to be Home Economics and Technology, Household) Teacher, German Language Teacher and Computing (used to be Computer Science and

Programming) Teacher comprising 77 (21 male and 56 female) applicants in year 2018, 97 (22 male and 75 female) applicants in year 2019 and 73 (20 male and 53 female) applicants in year 2020. Comparatively the most popular qualification has been the English Language Teacher (average 40 applicants a year), Latvian Language and Literature Teacher (average 20 applicants a year), Computing Teacher (11 applicants a year), Design and Technology Teacher (average 10 applicants a year), and German Language Teacher (4 applicants a year).

From all the 247 exam papers were randomly chosen the papers and oral responses of 90 students for in-depth analysis, every year 10 male students' papers and 20 female students' papers, in total 30 male students and 60 female students.

The main emphasis in relation to career activities is based on the development of the concept of "career readiness". As a result, not only clear and unambiguous text was analysed, but also different levels of text content – primary content (topics, main ideas) and latent content (contextual information) were pointed to in relation to the entrance examination questions: what determined applicants' choice of the teacher's career and how informed they were about teacher's work. The criteria for the analysis were based on the subjective and objective career (Judge et al, 1994) factors, often mentioned words in their goals and features in describing their suitability for the profession. Each of the focal constructs was defined using multi-item, in 6 categories: emotions, interaction, societal stereotypes/ clichés, family advice or tradition (the teacher dynasty), formal factors, experience.

Findings and Discussion

For several years the State Education Development Agency of Republic of Latvia (VIAA 2018) has been conducting a survey, which reflects young people's choice of profession and readiness for the chosen profession. The data of year 2018 survey show that only one third of the secondary school students in their last year of school have chosen what they will do after graduating from secondary school, and more than 40% of respondents have not yet decided about their future professional career.

Concerning the factors of career choice, for 68.14% of young people, it is important to understand what interests them and choose a profession that corresponds to their interests and understanding. This serves as the evidence of career readiness. The prestige of the profession is important only to 1.97% of respondents and demand in the labour market – 4, 32%. This can explain the surprise experienced later when the status of the profession is questioned. For (50.75%) of young people interesting and exciting content seems to be the most important factor in future work and profession, ranking salary as the second in importance (37.69%), followed by the opportunity to apply their knowledge and talents at work (28.85%), and 26.41% have marked good and responsive colleagues which is really essential also for teacher's profession.

57.51% of young people also point out that no one has helped them in choosing a profession, they have made the decision independently. Family and parents have provided support in decision-making for 35. 67% of young people, friends – 5.01% and teachers – 1.8%. The impact of teachers in decision making process is surprisingly low here, as according to the data analysis of entrance examination interviews teachers have been quite important players in choosing teacher education programme.

In addition, only one third (28%) of young people value their "strengths" and which sector or profession they can best use their talents. Thus, it can be said that young people at the beginning stage of career are quite "illiterate" and not aware of very many factors. This is also present in the interview responses of teacher education programme applicants' entrance examination.

In total from 90 (30 male students and 60 female students) randomly chosen applicants' papers, 110 response items have been used for in-depth analysis. Several respondents gave more than one answer to the question and the responses revealed different notions, so they were analysed separately. The analysis was based on the subjective and objective career factors, often mentioned words in their goals and features in describing their suitability for the profession.

The highest number of responses (29 responses out of 110) goes into the category of emotions where mostly is expressed “liking to work with children, willingness to help children”. In the category of subjective reason “enjoyment of specific school subject, one’s own children” 26 responses can be placed. Next in the succession of frequency are assumptions of what it is to teach – 23 responses; followed by experience “having taught someone something and family traditions” – 14 responses. Nine responses were linked to the categories of interaction and outside factors, like regulations and pressure. Most often mentioned words in applicants’ responses are teacher – 58 *times*, *children* – 48, *I like* – 34, *to teach* – 33, *to perform* – 30, *to work* – 22, 21 – *profession*, 18 – *emotions* and 18 – *inspiration*, 14 – *to help*, 13 – *abilities* and 13 – *knowledge*. Thus, it can be stated that applicants’ readiness for the career is more based on the emotional assumptions than exploration and knowledge about the profession.
After the analysis of the respondents’ answers to the questions of the entrance examination, five sets of thematically related responses can be pointed out: 1) understanding of the meaning of teacher’s profession; 2) experience and recommendations; 3) external requirements – the qualification is necessary to continue work at school; 4) external manifestations of teacher’s profession – enjoyment to work with children; 5) like of the subject. The classification of responses provides an opportunity to reformulate the entrance examination evaluation criteria, as well as recommendations for individualized further student career support in the study process.
In the set of responses (No.1) to the question why the student has chosen to become a teacher, the applicants reflect their understanding of the **meaning of teacher’s profession**, mentioning both socio-pedagogical and content goals, and the adequacy of their abilities:
“I want to become a teacher because I think it is a respectable profession because it is the teacher who introduces the student to the world, forms his personality. I am social and very communicative, I love children and young people, I want to help as many students as possible, not only as a teacher, but also as a friend, supporter, trustworthy person. I want each of my students to know that I can be trusted because I know that not all young people have such a person. I have also enjoyed being a teacher “on my own skin” and it was great.”
“Proper, accurate and good use of the Latvian language is important to me.”
“I chose to become a teacher because I want to give children/ young people the opportunity to acquire knowledge in a modern, creative way, and to convince them that even complex things can be solved, they just need their own way.”
Next set of responses (No.2) refers to **experience and recommendations**. All applicants have met teachers during learning process and refer to this both as positive and negative (could also be called passive) experience. Applicants also mention that teachers have recommended choosing teacher’s profession.
“I have studied with exceptional teachers who have motivated and convinced me about this career direction. I also have had bad experience that motivates me to be better, to make changes so that others do not have to experience it.”
“I chose to become a teacher because I was motivated by my first teacher.”
“I was very inspired by my high school teachers as well as acquaintances who recommended it to me. I want to be the kind of teacher I wanted to have for me.”
Some applicants describe their experience of pedagogical activity, which has been positive.
“The choice to become a teacher was only made at the end of the 12th grade, when I had the opportunity to teach mathematics to younger students in lower grades during pandemic lockdown, and the feeling of reward I gained was indescribable.”
“I have been teaching private math lessons for five years. I want to learn to teach at school as well. I have got high interest in pedagogy, especially modern methods.”
The further career support of such students should be focused on the analysis of their needs and challenges, the development of an individual plan for professional development, so that students do not overestimate their initial success and do not stop at their professional development.
Some applicants base their choice on the experience of their parents – teachers.

"To continue the choice of teacher's profession for generations – when I start my studies, I will be the third generation of teachers in our family."
"I really like the school environment. There are other teachers and educators in my family – that have played a role in choosing a profession."
"My mother is a teacher and, of course, I have experienced all the years at school myself, so the teaching profession is very familiar to me. Unlike other professions, I am clearly aware of my responsibilities as a teacher and I feel good in the school environment. The teaching profession provides an opportunity to be versatile, precise and creative, and I would like to teach the same to others."
"I chose to become a teacher because it is one of my dreams, as well as that of my grandparents."
In the theoretical literature, inclusion in the dynasty, inheritance of the profession from generation to generation is evaluated differently. Vondracek and Skorikov (1997) refer to this as deprivation of rights, which restricts career choice (the child follows the path of habits), but it is explained as the prestige of the profession, social status. The position of a teacher is a stable profession that parents recommend to their children. This justification is related to the student's personal values (it can be stated that the student comes from an environment where education is a value), and the recognition of the social status of the profession. It is also interesting to link the written responses of this group of students to their understanding of the professional field (education sector) in the interview part of the entrance examination. It could be expected that such applicants would be more knowledgeable in the questions of the education sector, but surprisingly the applicants' awareness is comparatively narrow. There are even such shocking cases that the applicants that are already working at school are very little informed about the novelties in the field. This ignorance is rather hard to explain. What is more during their studies, students often choose to do their teaching practice in "their" school – the school they have graduated from, with well-known teachers – mentors. They support their choice by "*I know everyone there, I will get help there, it will be easier for me*". To support the career of the future teacher, it is strongly recommended to get acquainted with as many different schools with different working conditions as possible during the studies in teacher education programmes of FEPA, UL.
Another set of responses (No.3) can be outlined as the group of applicants who justify their choice with **external requirements**, they are already working at school and the qualification is compulsory required to continue the work.
"I like to communicate with young people, I want to share my knowledge. And I need education in pedagogy to become the instructor of cadet force."
"I am already working as a teacher and I want to continue this work, accordingly teacher's qualification is needed."
The above-mentioned considerations regarding the necessary support for the students' conscious professional development are applicable also to this group. Besides, during the interview of entrance examination attention should be paid to applicants' communication skills and speech quality, not to accept clichés, phrases and pathos, but ask in-depth questions.
The respondents who express an emotional attachment to the **external manifestations of the teacher's profession**, i.e., their enjoyment of working with children, communicating, helping, teaching, etc. will fit in the set of responses No.4.
"I have loved children since childhood, helping them to learn, develop and become smart and kind people."
"I have always enjoyed working with children. During lessons I have always imagined how I would feel in the teacher's place. I also think that my job as a teacher would give me a sense of satisfaction."
"I like working with children (have got four children myself)."
The responses (Set No. 5) reveal the choice made because they like the subject, and this indicate even more insecure career planning.
"During school I liked and did very well in these subjects."
"I want to become a teacher of Latvian language and literature because I like to read, interested in culture."
This motivation for choosing a profession is not stable, because when confronted with everyday work, getting into problem situations, positive emotions can quickly be replaced by frustration, dislike, rejection. Similarly, emotional

evaluation traditionally continues to dominate in the evaluation of the first teaching practice. In the career support of such students, the orientation should be on the studies of educational psychology, planning and evaluation of the expected outcomes of one's performance, analysis of education case studies.

Concerning male and female applicants' responses, the responses given by male applicants are livelier, there are fewer clichés.

"At first, as a joke, my friends said that I should become teacher, because I am good at explaining computer issues. Joke by joke – here I am."

"Seeing the misery of those who do not know history, I followed the thought "if not me, who, if not now, when?" I like to tell stories, and there is no more interesting story than history!"

"I want to earn well, maybe not money, but a feeling of happiness and satisfaction, I want to understand and improve, inspire and excite."

Another conclusion about male student applicants is that their choice is more based in experience gained and external requirements, as for female student applicants – subjectively emotional experience and assumptions. The applicants with previous teaching experience are more specific in their responses and provide support to their statements.

To sum it up, the features of the following theories (*Trait-and-Factor Theory, Career Development Theory, Theory of Professional Choice, Social Learning Theory of Career Choice and Counseling and Chaos Theory of Career*) can be noticed in the responses of the applicants, but the applicants are quite unaware of them and reveal chaotic understanding of the chosen career.

Finally, the choice of the profession is a logical part of a dynamic, self-organizing process of life planning that involves the individual, the environment, interaction and change.

Conclusion

The research findings give the evidence of state of the art of the teacher education programme applicants "career readiness". The intention was to reveal career readiness through the understanding of objective and subjective career factors.

Majority (79 out of 90) of teacher education programme applicants choose their future career based on the subjective career factors (values, job stability, challenges, work-life balance, goal fulfilment, etc.), however in the society they are judged by objective career factors (promotion, salary, economic situation, etc.) and the lack of congruence between them might make teachers leave their profession. On the other hand, probably this is very selfish to expect that exactly teachers, especially when in Latvia they are not state officials, should stay in their profession for all the life if there exists "career without borders" and there is a free opportunity to move from one employer to another. Leaving teacher's profession might also be explained by the urge to continue learning and become competitive. However, work at school would expect more cooperation and interaction instances which were mentioned seldomly in applicants' responses.

Environmental conditions, their limitations and opportunities, connections with other people, different responsibilities influence and determine the choice of profession.

The data make it possible to judge the applicants' understanding of their chosen profession, reveal the points that are considered relevant in the chosen profession and that identify them as "good teachers" or people "who can apply for the position of teacher". The data also reveal applicants' values, ambitions, e.g., "*Do you want to change something important in education in general, or plan some career development, improvement (objective career)*?"

The analysis of the answers of entrance examinations also provides feedback for the improvement of the entrance examination questions. To avoid empty phrases and "loud words", the question for the written entrance examination should be reformulated: "*Why is it important for you to be in this profession?"* Besides, being aware that the teacher should be able to tell stories, use examples, allegories to address students' emotions, the assessment criteria should be improved by valuing descriptive language, humor, non-standard answers or creative solutions.

Concerning the interview part question how informed they are about teacher's work, the following evaluation criteria could be defined: 0 – name the keyword(s), know the fact (*likes work*); 1 point – have an idea and is able to communicate it (*must cooperate with parents*); 2 points – explain and give one's personal opinion, vision (*I will cooperate with parents because only common requirements will allow the initiative to be implemented*…); 3 points – possible actions/ behavior is expressed (*for working with parents I will develop a plan for monthly afternoon meetings where…*).

As to the study process improvement, the needs analysis of the students should be carried out in order to design individual plan for professional development, educational psychology and socio-emotional learning should be fostered, the development of story-telling skills should be focused on, planning and evaluation of the expected outcomes of one's performance should be modelled, and teaching practice in variety of schools should be gained during the study years.

Plagiarism Rate : 1%

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Pedagogical Aspects of Awareness Formation of Visual Art Language

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Abstract
The education topicalities determine the need for comprehensively educated people who are able to work within a wide range of activities, accepting new spheres through learning and development (Fadels, Bialika, Trilings, 2017). Art pedagogy is interdisciplinary, and it fully reveals the mutual integration tendency of various disciplines, which is characteristic to contemporary education in general (Cohen, 2020). Raising awareness about the artists' creative pursuits, application of various materials and techniques in the process of artistic activity – these are the issues that have always been in the centre of attention of art educators. The research object: artistic activity. The research subject: awareness formation of artistic activity. The research methodology is developed referring to the topicalities of current transformations in education, the findings of scientists, the opinion of professional artists about the artwork creation process, and research studies on the practice of art pedagogy from the perspective of emerging teachers. Considering the above mentioned, the following research question has been put forward: What pedagogical aspects can be influenced by drawing students' attention to the issues of comprehending the visual art language. In turn, the inclusion of artworks in the pedagogical process facilitates the transition from monologue to collaboration helping students to understand the diverse perspectives of human existence. Works of art give the teacher the opportunity to present the events that happened in the past and develop an understanding of personalities and a particular era. The obtained research results can become a basis for further research.
Keywords: Visual art language, art perception, artistic activity, visual art in education.

Introduction

In the Sustainable Development Strategy of Latvia until 2030 the attention is drawn to the fact that along with the accumulation of specific competencies and qualifications that determine a person's ability to enter the labor market and build a successful professional career, education is also a development process of human talent, emotional and social intelligence and personality (Sustainable Development Strategy, 2010). This also applies to the actualization of the importance of learning the visual art language in the general education process. K. Robinson, an internationally recognized expert in promoting creativity, innovations and human abilities, actualizes the discussion that education is not and has never been an objective process of developing natural abilities. The author notes that the education for masses is justified by the prevailing economic vision and the phenomenon of academic knowledge inflation. On the other hand, human feelings and opinions, values, motivation and aspirations are often ignored. The scientist believes that it is the existing education system that causes staff-related problems in the enterprises, businesses and public institutions, thus affecting both professionals and those who do not have particular qualifications (Robinson, 2013). This points at topical issues and existing problems in the field of education in general.

The events and challenges of the 21st century raise the need for creative, adaptable and innovative professionals. This has a significant impact on the implementation of appropriate changes and on shifting the emphasis for the implementation of educational content in general education institutions. In this context, the development of interdisciplinary knowledge, as well as the development of students' skills and character are important aspects in the curriculum implementation process, so that during the school years the pupils learn how to acquire knowledge throughout their lives (Fadels, Bialika, Trilings, 2017). At the same time, every person as a member of the society, has the right to development and participation in the economic, social and cultural spheres in accordance with the structure and resources of each country. This position stipulates that everyone have the right to participate freely in the cultural life of society, as well as to enjoy, create, perceive and understand art in a meaningful way. R. Cohen, the vice president of research at Americans for the Arts, points out ten important positions why art plays an important role in human life and society as a whole. According to the research results obtained by this author, the most important aspects are the following: art has a potential to unite the society and help people to understand better other cultures, it improves the well-being of individuals, raises students' academic performance, strengthens economy, promotes tourism, stimulates creativity and innovations, drives the development of creative industries, improves the student's well-being and lowers the poverty level, improves health care, as well it has a positive impact on the health and well-being of the military (Cohen, 2020). These research results are linked to art's complex ability to positively influence the results of the pedagogical process and human life in general, as well as to interact with different fields.

Also in Latvia, art scientist and pedagogue J. Anspaks expresses the opinion that in the pedagogical process the orientation on art values helps the students to overcome rationalism in personality development, and it forms a new perspective on real life situations and communication, exploring basic cultural values and processes of practical activities (Anspaks, 2004). It goes hand in hand with the teacher's ability to form creative personalities who are able to critically perceive and explore the world around them, imagine, fantasize and express themselves emotionally, realistically evaluate the life situations and challenges, as well as actively participate in various spheres of human activity. Thus, it can be concluded that visual art has a significant pedagogical potential, it has an interdisciplinary, practice-oriented nature and it fully reveals the possibilities of interaction between several disciplines. Keeping in mind the above mentioned, the essence of visual art language and the aspects of its impact are further studied in more detail.

The language of visual art

Raising awareness of the visual art language is one of the means for implementing the topicalities of the 21st century in the general education context. From a historical point of view, a reference can be made to the study of the historian, philosopher W. Durant on the ideas expressed by the famous ancient thinker Aristotle about the essence of art. W. Durant calls one's attention to the ideas of Aristotle on the influence of art on both human intelligence and feelings. In the above-mentioned findings, W. Durant particularly emphasizes Aristotle's thought that the most important task of art is a catharsis, purification, so that a person can gain excitement and joy, pointing out that art has an essence of almost a mystical power (Durant, 2012). This confirms that the importance of art has been appreciated in all times. The influence of the visual art language primarily lies in its imagery. The embodied art image is the main basic unit in a work of art. In the image of art, individual peculiarities are manifested in features that are characteristic to one's time, everyday life, social group, a nation. In psychology, the term "image" is seen as a subjective phenomenon that arises as a result of practical, sensory perceptual thinking, which is a reflection of reality in which the most important categories (space, movement, colour, shape, texture, etc.) coexist simultaneously. In terms of information, the image reflects a voluminous representation of the surrounding reality (Psiholoģijas vārdnīca, 2004). The concept of artistic image can be defined as a product of creative imagination with the following main characteristics: emotional experience (empathy), vivid associative image and reflection. Thus, it can be concluded that in the implementation of the pedagogical process the image can be used as a source of cognition also for such objects that are not directly observable, but can be attributed to a person's inner spiritual essence, the reality of the surrounding world, and emotional atmosphere and ambience of the nature.

In addition, the image can serve as a source of cognition not for a passive but for an active artistic activity. The artistic image always includes the emotional assessment of the author's surrounding reality. As a result, it can become a stimulus and a source of the performance appraisal for many types of pedagogical activities, for example, in upbringing. The art image is creation of a new ideal object that promotes the transformation of reality and at the same time the creation of a new reality. The art image is, by its very nature, a sign, a visual language between an artist/author and a viewer, reader, or listener. In this dialogue, the image of art, developed through visual language techniques, becomes an integral part.

The inherent qualities of the visual art language are often related not only to the artistically imaginative representation of reality, but also to its social, unifying meaning. The prominent Russian psychologist L. Vigotsky has written that art is a social technique of feelings, a tool for involving the society in the most intimate and personal areas of our existence (Vigotsky, 2016). This corresponds with the opinion of the scientist K. Robinson that artists do not simply express feelings in the created works of art, but they express ideas about feelings, searching for the forms, connections and a meaningful vision of life through the means of visual language expression (Robinsons, 2013). It can be concluded that a direct analogy is formed between the acquisition of visual art language and the processes of artistic and pedagogical activity, promoting students' personality development within a harmonious whole. Therefore, also pedagogical activity, just like art, is aimed towards building humane relations between people.

In the research context, it is important to emphasize the idea of the philosopher H. G. Gadamer on the language of visual art and artistic activity as a universal form of human communication. According to Gadamer, as time goes on, art has a significant impact on all public life, sometimes abandoning figurative traditions and understandable forms of expression from its artistic language, becoming completely incomprehensible and problematic. Art history offers countless examples that demonstrate abandonment of tradition or a customary and socially accepted setting. For example, at the turn of the 19th-20th century, the impressionists renounced the naturalistic correctness, trying to reveal the overall impression of the work of art by applying a technique of separate small strokes following the colour gradations created by the ambience. This example marks a change in the development of visual art language. It should be noted that at the beginning of the 20th century artists dramatically expanded the range of techniques when creating their works of art by gluing paper, fallen leaves, pebbles and other materials on their paintings, creating unique collages to convey the message to the viewer as differently as possible. Art historian Nadeije Laneyrie-Dagen rightly describes the new trends in art as the bankruptcy of traditional systems. The author points out that the paintings created in the form of a collage, installations, photo reproductions, videos and films created an irreversible time of change (Lanerī - Dažāna, 2005). Thus, the development of the visual art language facilitated the expansion of the boundaries of art, gradually changing the perception of art in society. The development of the visual art language and its enrichment takes place through interactions with other disciplines and interdisciplinary research.

The well-known abstractionist V. Kandinsky (1866-1944) studied the relationship between the art and music. According to the research of art scientist R. Cumming, V. Kandinsky has admitted that the colour is the piano keys, the eyes – piano hammers, but the soul – the very multi-string instrument. V. Kandinsky believed that the artist is the hand of a musician who plays one scale after another, awakening the thrill in the soul (Kamings, 2000). Thus, in line with the artist's theoretical findings, the compositions developed in which each line and colour obtained its own independent psychological significance. For example, the abstractionist V. Kandinsky describes broken lines as youthful, but curved lines as mature, but a dot within a small circle he characterizes as a small space, equally closed from all sides. It can be noted that the theory developed by the artist about the emotional and spiritual effects of colours still carries important information for developing the visual language awareness of future artists and teachers (Kandinsky, 2011). It is possible to conclude that the visual art languages, by their very nature, incorporate inexhaustible possibilities, encouraging everyone to explore, discover, feel and create.

Perception of an artwork

K. Wilber, a developer of integral theory, says that to understand the work of art, we must try to comprehend the original sense and meaning that the artist has placed in his/her work. At the same time, the author notes that the intention to "reconstruct" and "restore" the artist's idea is a very delicate, difficult and maybe even impossible task. However, according to the scientist, there is no reason to ignore such an intention (Wilber, 2004). In the artwork, synthesizing various activities and using a variety of attributes, the artist reflects people's attitude towards the reality and themselves. Thus, several aspects need to be emphasized in the artwork perception process. It must be taken into account that each culture has its own national peculiarity, and if it is protected and preserved in the works of art, then national values emerge reflecting the peculiarity of a nation. Without recognition of national, the universal cannot exist in the art (Postažs, 2009). The opinion of the artist P. Postažs resonates with the formation of the human value system. Besides, the art and its language, covering a wide range of disciplines and stylistic possibilities, is able to accumulate and reveal the originality of traditions, feelings, ideas and various historical stages in the development of human culture. This is important for humanity, where the national peculiarity is mixed with the universal.

Scientist H. G. Gadamer emphasizes the tendency of modern visual art language to reduce the distance between the viewers, consumers and the audience by experimenting, improvising, inviting to participate and confusing the spectators (Gadamers, 2002). This actualizes that in the process of art perception the language of art does not directly reflect the external appearance of things, but their internal significance, giving a person an insight into the reality of real life. The perception of art in the society has always been reinforced by media-inspired myths and legends about artists, their lifestyles, their clothes and their behaviour. At the beginning of the 20^{th} century, the artists expressed a dissatisfaction with the academic education through changing the styles and directions of generations and modernism, criticizing their time, denying its values, thus showing resistance to the mass culture. In the beginning of our century, the society rated the artworks of the conceptualist D. Hirst as particularly controversial. One can refer to the work of art "For the Love of God" (2007), when the artist created a diamond-encrusted human skull, thus showing the most unpleasant and absurd, as well as provoking, insulting, annoying and challenging society by visual art language means of expression. The work of this artist raised several questions related to the perception of the work of art: what is art, what is the meaning of the work of art, does art have boundaries, what is the task of the artist and art, how is contemporary art perceived by the society?

The technological developments open up more and more new possibilities for the creation of unprecedented art products, such as animations, videos, manipulation in the digital environment, interactivity, and synthesis of arts using sound, movement, light and images. It is an opportunity to unite the elements of the art language in a peculiar synthesis. Creativity expert K. Robinson points out that nowadays millions of people around the world have acquired unprecedented means for expressing their creativity in the language of sound, design, science and art. According to Robinson, if an artist handles the video camera, the film can be as emotionally touching as a painting created with a brush and oil paints (Robinsons, 2013). This is a time of challenges and benefits, when the integration of new technologies in the context of the visual art language creates both advantages and threats in the perception of art products created during the formation of human value system. Gradually, as the experience of humankind accumulates, the tasks of education, life and art become more complicated. In turn, the teacher, when implementing the pedagogical process, must be able to purposefully select and include the works of art and artistic practical activities to provide the relevant pedagogical functions, such as encouraging the cognitive processes, understanding of aesthetic values, solving the upbringing issues, promoting interests, and providing support in professional or general education.

Artistic activity in the artwork creation process

When creating a work of art, the artist "outlines" or expresses the world of his/her consciousness in the form of signs. By translating the phenomena of reality in a particular form – in the form of an artwork, the author implements the artistic reflection of his/her world – the artist's world, and expresses his/her vision using the means of expression available. J. Pujats, the Cardinal of the Roman Catholic Church, has commented on the work of artist V. Bušs saying that this artist is not satisfied just with the representation of the outer shell, but he tries to delve into the essence of the particular phenomenon, thus giving its fullest possible interpretation. According to the Cardinal, the art created by V. Bušs grows from a deepened aesthetic attitude towards reality – the homeland, countryside and cities, work of the people. The world of emotions, proving his bright thoughts and liveliness, flourishes, and an art form develops full of inner excitement (Bušs, 2014). By "reading" the text of an artwork, the viewer understands its content and, depending on his/her knowledge of the language of art, creates an appropriate image of art in his/her consciousness.

The artist's activity is daring and it also encourages to participate in the process of creative activity. Artists are experimenting, looking for new solutions, thus expanding the range of techniques in creating a work of art. The famous painter P. Picasso notes that the aim of the paper collage is to reveal that diverse materials can be utilized when developing an idea, so that they become a reality in the work of art. As the artist suggests, a strip of newspaper never served for picturing a newspaper, but to depict a completely different object – a bottle, a violin or a face. Thus, no element is utilized in the context of its direct meaning, but always outside its usual context, aiming to contrast its natural appearance with its new function. Representatives of the modern art direction expressed the opinion that if a newspaper strip can become a bottle, it encourages reflection on newspapers as well as on bottles. The artists wanted that audience would pay attention to this situation (Žilo, Leiks, 1991).

Art scientist R. Cumming, studying the peculiarities of artistic activity in the works of individual masters, reveals the peculiarities of the artist's handwriting style. Thus, he points out that the artist P. Klee (1849-1940) experimented with a diverse range of techniques, creatively and sensitively using different textures generated by different materials and paper. The artist initially covered the canvas with plaster, and then painted on it with watercolours, finally supplementing the artwork with various scratches. For example, according to R. Cummings, J. Pollock (1912 - 1956), creating his art, used drops or spatters of paint, using instruments such as sticks, dried paintbrushes and even confectionery syringes filled with the paint (Kamings, 2000).

In turn, the artist L. Kokle was one of the first in Latvia, who enriched the traditional technique of arsenal painting, using a putty spatula for creating voluminous textures resulting in interesting light-shadow play; he created beautiful and bright colour combinations, unusual but consistent, always choosing a particular tone (Konstante, 2005). Thus, the artistic creativity is able to encourage and expand the possibilities of our visual language, using a variety of techniques. Creativity expert K. Robinson rightly argues that artists are the ones who create unique forms of expression (Robinsons, 2013). Thus, we can conclude that the teacher has a wide spectrum of pedagogical activities in order to teach the language of visual arts to the pupils in an interdisciplinary context.

Artistic activity is a special form of pedagogical activity, which has general features, as well as it is closely related to the development processes of human nature. Its specificity is determined as an objective presence in the relationship system of "teacher - pupil", when it is purposefully used to address the issues of pupils' development, education, upbringing, support and socialization. The artistic activity can become an essential tool in the general education process, as well as an addition to the various forms of pedagogical work. Considering the above mentioned, the following research question has been put forward: What pedagogical aspects can be influenced by drawing students' attention to the issues of comprehending the visual art language.

Method

In this study, the awareness of the visual art language and pupils' creative artistic activities are viewed in the context of general education. During the implementation of the pedagogical process, the teacher has a possibility to choose samples of different visual art types in the historical and modern art context, to integrate the experience of artists' creative activity using various forms of work for the implementation of pedagogical tasks. The research object: artistic perception and activity. The research subject: awareness formation of artistic activity. The objective of the article is to actualize the creative pursuits of artists in the awareness formation of visual art language in pedagogical discourse for enriching students' visual proficiency and cultural awareness. The research methodology is developed referring to the current educational transformation topicalities in different documents, the findings of pedagogues, psychologists and other scientists on the pedagogical significance of art, the opinion of professional artists in the artwork creation process, and research studies on art pedagogy practice from the perspective of emerging teachers.

Findings

Exploration of the significance of learning the visual art language

Describing the essence of the visual art language, the artist V. Bušs believes that art in all its diversity and versatility is not just for entertaining the people. According to the artist, it can provide a great excitement that not only makes one or more people mentally mature and stronger, but also empowers even a whole nation to overcome the most difficult moments of its existence (Bušs, 2014). The author conducted a survey to explore the future teachers' understanding of the importance of visual art language in the context of the pedagogical process. The objective of the survey is to actualize the awareness of the potential possibilities of the visual art language from the point of view of emerging teachers. The group of respondents - 30 students of the Year 2 and 3 of the professional bachelor's study programme "Teacher" of Liepaja University (Latvia). The survey was conducted on May 28, 2020. The results of the study are revealed in Table 1.

Table 1. The importance of understanding the visual art language

Respondents' answers	Number of respondents	Results (%)
Development of creative activity	30	12
Emotional enrichment	30	10
Stimulation of imagination	30	10
Expression of emotions	30	8
Aesthetic enrichment	30	8
Expression of experience	30	8
Mental health promotion	30	7
Building intercultural interactions	30	7
Intellectual enrichment	30	6
More objective understanding of works of art	30	6
Universal language for conveying a message	30	5
Knowledge enrichment about artistic means of expression	30	5
Formation of understanding about human experience	30	5
Relaxation	30	2
Leisure time activity	30	1

According to the respondents, the understanding of the visual art language in general education mostly promotes the development of a creative activity - 12 %; followed by emotional enrichment of the personality and the stimulation of imagination - 10%; while 8% of respondents say it is needed for expression of experience and emotions, and for aesthetic enrichment process. 7% of respondents stressed the role of visual art language for promotion of mental health and intercultural interactions, 6% related it to students' intellectual enrichment and more objective understanding of artworks, but 5% of respondents see the visual art language as a universal means of communication among people, knowledge enrichment about artistic means of expression, and awareness of human experience. The respondents have assessed relaxation (2%) and leisure time activity (1%) as less significant. These results reveal that the emerging teachers understand the importance of developing the visual art language awareness in the context of general education. Thus, the survey results are in line with the theoretical knowledge of pedagogues, philosophers and artists.

Exploration of artwork perception

The artwork perception process can be considered as one of social communication forms in which non-verbal information plays a key role. According to the philosopher V. Agejev, each of the art forms employs only the set

of means of expression characteristic to it and determines the peculiarities of a dialogue, in which the viewer participates as a person who perceives the information offered to him/her (Agejevs, 2005). In the art perception process, the imaginative thinking mechanisms play a key role in understanding the diverse angles of human existence. Researching the understanding of the essence of an artwork and its perception, the author explored the comments of Year 3 students of the professional bachelor study programme "Teacher" of Liepaja University (Latvia) (on May 20, 2020).
The future teachers acknowledge the following:

- I perceive the work of art as something gorgeous, rich in emotions.
- An artwork is a product of expression, in which we can see the features characteristic for particular artist's work, the reflection of historical events, the existing social order and other things.
- An artwork is a work in which the author purposefully, intentionally, imaginatively and aesthetically displays his/her feelings, emotions, surrounding events.
- An artwork has no boundaries - it can be a reality or a fantasy, as well as a combination of reality and fantasy.
- An artwork is the artist's message to the viewer, which tells a story without words. It can be direct or hidden.
- An artwork is a person's inner voice; display of emotions, feelings, thoughts in the chosen form of artistic expression.
- Artwork is able to take you to another dimension.
- Works of art live for years and centuries, they are passed on from generation to generation, and we can often see them in collections of art galleries, as well as we see how people's lives and art have changed.
- I perceive a work of art as a subtext and feelings that the artist shows and expresses, which are unconscious and cannot be expressed in words. That is why one story can be represented so differently, as it is differently perceived by each artist.
- I perceive the work of art as the author's inner feelings, fervent desires and fantasies. The works of art express what the author may not even be able to talk about.
- In my opinion, each work of art says something about the author's deepest feelings, which he/she reveals to the public. Of course, some of the authors in his/her works of art might share his/her life experience. There can be all kinds of works of art, and I think that in the future they will surprise us more and more.

Thus, we can conclude that in the process of artistic perception, the information and knowledge is transferred to the recipient. In the works of art, the reality is often altered, and their nature is emotional. The artwork perception process requires studying the subject/object/phenomena, the content included in the work of art, and the means of artistic expression. The answers show respondents' understanding of the process of artistic activity. Here the parallels of visual art with pedagogical activity are marked, the essence of which is revealed in the development of experience, stimulation of imagination, formation of cultural understanding in order to form everyone's personal view. Each person's emotions are related to an individual experience that has a unique and unrepeatable character.

Exploration of awareness development of visual art's language in the pedagogical process
According to the educators, philosophers, artists (Agejev, Anspaks, Bušs, Gadamer, Postažs), knowledge of visual art is an important part of everyone's life, as well as an important source for getting to know a culture. In turn, when getting to know the culture, a person begins to understand his/her relationship with it, acquires more objective knowledge about oneself, it encourages creative expression of ideas and gives ability to critically evaluate the creative artistic activities. A teacher can employ various activities for promoting artistic activity perception of works of art. In order to find out the visual art language forms in the educational process, the

author conducted a survey in Liepaja University, Bachelor's study programme "Teacher" (on May 15, 2020). The survey results are reflected in Table 2.

Table 2. Visual art in the education process

Activity form	Remarks
Exhibitions	To organize joint exhibitions of professional artists, teachers and pupils at school, art gallery, or online environment.
Revival of works of art	To create the environment depicted in a work of art, to copy the postures, clothes, accessories of the depicted people and to capture it in photographs and create a video.
Creative afternoon together with family	After the school, students, parents, teachers, brothers/ sisters, grandparents work together creating and artwork in visual arts.
Artists' master classes, creative workshops, guest lectures	Lessons/extracurricular activities are not led by a teacher, but by a well-known/lesser-known artist who tells, shows, teaches about his/her work, encourages pupils, gives advice.
School interior design	I believe that a great activity would be painting of walls at school. I know that the school management tends to be against such ideas, but I find it fantastic. The schools are for pupils, and it would only be nice if they were allowed to get involved in drawing on the school walls, making their own environment more interesting. In addition, such activities tend to interest pupils and they might choose to pursue art in their future career.
A walk in nature	Pupils are given the task to go for a walk and take photos of objects, nature sights, etc., which, in their opinion, would be worth compiling in the book "Latvian Cultural Identity 2020" created by the pupils. Each student participates in the compilation of a joint "book", adding to it one work of art, based on what he/she has seen and felt in his/her immediate surroundings. It can be done in e-book format.

In Table 2, the author has summarized only some creative artistic activities in order to provide an insight and encourage a further action during the implementation of pedagogical process. The expressed ideas confirm the future teachers' understanding about the possibility to include specific artistic activities in the general education practice, envisaging the possibilities to model activities according to the real situation.

Conclusions

The visual art language is emotional communication between the people, and it functions as a special information transmission and exchange system between the contemporaries and eras. It is a language in which the artist expresses his/her feelings and experiences as well as opinion about various phenomena of life in the form of images. It talks about its time, customs and achievements. It can be described as a signalling system through which one generation passes on its experience to the next.

The language of visual art acquires its expression in accordance with thinking and emotions, feelings and imagination, addressing the subconscious, indicating to a person the meaning and goals of his life, helping to understand the world and oneself. Keeping in mind the complex impact of visual art on people, it can be concluded that it has a pedagogical potential and is an important part of education.

The works of art, reflecting reality in artistic images, do not copy reality, but transform it by modifying it using a special composition of time and space. The artwork perception process results in the development of emotional attitudes and enrichment of the world of emotions and feelings. In turn, the inclusion of artworks in the pedagogical process facilitates the transition from monologue to collaboration helping students to understand the diverse perspectives of human existence. Works of art give the teacher the opportunity to present the events that happened in the past and develop an understanding of personalities and a particular era. Similarly, also students' artistic creations can reveal the uniqueness of an era that is studied in the educational process.

It is the uniqueness of the artist's personality and his/her peculiarity of perception that develops in people the ability to look at simple things differently, from a different angle. Thus, it can be concluded that the artist's task is to find a basic thought of his/her time - a thought that is not vanishing, a form appropriate for his/her time, a set of means of expression, which is the most objective testimony to the time when the artwork is created. In turn, educating to perceive the surrounding environment is one of the most important tasks of pedagogy.

The teacher has an opportunity to implement a variety of creative artistic activities, forms of work, use different materials and techniques in the pedagogical process, as well as apply new approaches in order to help each student to find their areas of interest, develop a meaningful understanding of visual art language, its means of expression and artistic activity.

Plagiarism Rate = 14 %

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Innovation of the Teaching of Modern Interactive and Multimedia Tools in Teaching

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Abstract
The paper deals with the issue of innovation in teaching associated with the application of modern interactive and multimedia aids to teaching due to the need to implement a remote form of education, either via the Internet or other interactive form. Today, the computer is a common tool for entertainment, communication, job performance, and, of course, education. The ability to work with information, control of information and communication technologies, and orientation in information sources is becoming a key competence for human employment in the labor market. Unlike literally exponential developments in the world of media and technology, a person's preparation for his active life in society is changing much more slowly. Pupils now expect a wide school and seamless access to information by analogy with everyday life, and our education is not always able to meet this expectation. There are barriers not only on the part of teachers, but also the specifics that the integration of digital technologies into the cognitive process brings with it. The complexity of teaching associated with changing methods and forms of work of teachers and students, the existence of open learning resources, collaborative learning, and mobile learning bring with them the need not only for an adequate approach by teachers, but also a technical, technological approach by the school as an institution.

Keywords: Innovation; Teaching; Interactivity; Multimedia; Distance Education

Introduction

We live our lives in the 21st century, in a century of global society, media and technology. The world has shrunk in a literal sense, information about what is happening on the other side of the globe, we know the practice immediately. Every day, the media acquaint us with quantities of information, which, however, not only tell us information, but also shape and influence our perception of the world.

Today, the computer is a common tool for entertainment, communication, job performance, and, of course, education. The ability to work with information, control of information and communication technologies and orientation in information sources is becoming a key competence for human employment in the labor market. Unlike literally exponential developments in the world of media and technology, a person's preparation for his active life in society is changing much more slowly. Today, students already expect wide and trouble-free access to information at school by analogy with everyday life, and our education is not always able to meet this expectation. There are barriers not only on the part of teachers, but also the specifics that the integration of digital technologies into the cognitive process brings with it. The complexity of teaching associated with changing the methods and forms of work of teachers and students, the existence of open learning resources, collaborative learning, and mobile learning bring with them the need not only for an adequate approach by teachers, but also a technical, technological approach by the school as an institution. Very often today we find that we are not talking about an information society, but about an educational society (Musil, 2011), which is characterized by a rapid and efficient transfer of information from source to user. Education is no longer the result of a single life stage, but a lifelong process. The strategy of digital education until 2020 has three basic tasks:

- to improve the knowledge, skills and competences of children, pupils and students, to inspire and stimulate them to lifelong learning and thus help them to live better,
- increase equity in education,

- strengthen the prestige and relevance of the school in society.

These tasks will not be possible to solve without digital technologies and their full incorporation into the teaching process, it will not be possible to solve without innovations in education.

Education and teaching are pedagogical concepts that we often encounter not only in professional pedagogical practice. Education is considered a process of acquiring and subsequently developing knowledge, intellectual abilities and practical skills, developing the intellectual side of personality, thinking and memory. This process forms part of the so-called education in the broadest sense (ie, all purposeful, planned, controlled, and intentional and unintentional actions on humans), which also includes the creation of physical and mental abilities, skills, which is also referred to as education in the narrower sense (see, e.g., Skalková, 2007; Bertrand, 1998; Petty, 2013; Průcha, 2009; Vladescu 2016 and others). Teaching, self-teaching is then a pedagogical process in which the teacher, the pupil, and the content of education (ie, the curriculum) appear to meet certain educational goals. These goals are actually an idealized idea of what needs to be achieved through the teaching process. These are the knowledge and skills that a student should have or acquire in the process. In the didactic concept, this concept has a somewhat different definition - teaching is conceived as a kind of human activity, which consists in the interaction of teachers and students. The basis of such an interaction is the intentional action on students so that they have a learning process (Průcha, Walterová and Mareš, 2013).

Both concepts of education and teaching are one of the key concepts for our lives, for our existence, development and life success, although not the only one. However, it is obvious that an educated person is better able to work in a job and in society in general. Thus, education greatly affects our lives, our careers, and is an integral part of the social determinants of health (Wilkinson and Marmot, 2003). There is considerable controversy in pedagogy about the degree of representation of general and professional, material, and formal education in human life. However, we believe that for the life of a person, for his application in society, all components of general and professional, material and formal and informal are equally important and important for his life. At present, Czech education is on the threshold of a new stage, when new technologies are entering the educational environment, bringing new possibilities, but also many hitherto unknown problems (Vladescu (2017).

Method

It is a study of a theoretical nature based on the nature of the problem and based on the current changes in education, where the paradigm of constructivism in education reveals new areas associated with the development of society in the 21st century. The paper is based on the analysis of approaches to these issues, provides a description and on this basis draws possible conclusions as a stimulus for changes in approaches in the training of future teachers and teachers working in professional practice.

Innovation technology and education

Although innovation and innovation processes are very often used in the context of discussions on the development of education, modernization of education (Levin, 2012), due to their multi-layered and at the same time complexity, they are a topic that is not always reflected in lay or professional discussions. all its complexity is not always understood in a positive, evolving sense. This is one of the reasons why we can say that education self-teaching is, in contrast to other areas, associated with only a small amount of innovation. Why this is summarized, for example, by Canuel (Canuel, 2012), who sees the reason for the low amount of innovation in the fact that established education management systems do not take innovation as a standard that can even be measured. Therefore, the education system leans more towards appreciating the well-established conformity and self-satisfaction than preferring experimentation, new creative ideas. On the other hand, word innovation is a term that has often been frequent in recent years in connection with teaching and learning. However, we must realize that practically anything can be hidden under it (Brdička, 2009), even the excessive administration.

Evaluating innovation is not easy at all, and usually more or less any change is hidden under the term innovation. However, innovation is, to a greater or lesser extent, an essential part of the functioning of any system. The concept of innovation refers to one of the levels of system development, namely, the level of intentionally introduced, targeted, and usually also reflected changes. The Encyclopedic Dictionary (Bradnová, 1993) expresses innovation in the words: "change, renewal or measures that are aimed at improving technology or improving products." processes or products of activity, whether this designation expresses more renewal of the functionality of the existing system, or rather the introduction of innovation.

Rogers, Shoemaker, 1973 states that innovation is an idea that a person or system accepts as new. According to the approach of the so-called social formation of technology, innovation is an ongoing interactive process that involves many actors, not just society or technology. Many innovations come with the implementation and use of technology in various social, economic and technical contexts. We can say that innovation depends on the relationship between their users and creators (Musil, 2011).

The mass media help to spread or embrace technological and societal innovations that are essential for modernization (Rogers and Shoemaker, 1973). Dissemination of innovation is therefore part of every modernization process. With new technology, however, comes the challenge of positive acceptance of innovation by the adopter, and the basic point of adopting innovation is the process of its dissemination. Rogers (Rogers, 1983) describes the process of spreading innovation in five stages:

1. relative advantage is the degree to which a given innovation is perceived as better than before;
2. compatibility is the degree to which innovation is perceived in accordance with existing values, past experience and the needs of its potential beneficiaries;
3. complexity is the degree to which innovation is perceived as difficult to understand and subsequently use;
4. modifiability is the degree of experimentation with innovation while modifying some of its functions;
5. transparency is the degree to which the results of innovation are visible to others.

The higher the value of each stage, the more likely it is to accept the innovation. Rogers (Rogers, 1983) further divides the process of deciding on the acceptance of innovation into five stages:

- knowledge or understanding of how innovation works;
- persuasion or the creation of an attitude towards innovation under the influence of many subjects;
- a decision when the beneficiary decides whether or not to accept the innovation;
- implementation where the beneficiary finds its own use of the innovation;
- confirmation when the beneficiary confirms or denies his decision

According to Rogers (Rogers, 1983), the recipients of innovation can be divided into five categories, where the so-called "late majority" is the most influential, while the strongest opinion leaders are the so-called "early adopters":

- Innovators (2.5%) are active seekers of new ideas;
- early adopters (13.5%) are the second to adopt innovation early for their extensive communication and relationship networks, and their views are respected;
- the early majority (34%) are careful, first they turn to their loved ones or opinion leaders;
- the late majority (34%) are skeptical and often accept innovation under the pressure of the environment due to work or economic inevitability;
- latecomers (16%) are then tied to tradition, often people in isolation and in relation to the past.

Society will get used to the presence of innovations sooner or later. Innovation becomes everyday life. For example, each of us today knows how to turn on and control a variety of home appliances that we did not even know existed a few years ago. It can therefore be stated that the future use of modern tools in teaching is more than likely and that users will get used to their presence, respectively. must get used to even those of the late majority. However, innovation in education is very complex. Stoll, Fink, and Earl (Stoll, Fink, and Earl, 2003) list the so-called external forces that stimulate innovation: economic and labor market influences, technological, social, and environmental influences, and political influences. and above all, this list does not help to understand some of the paradoxes related to the need for and at the same time resistance to innovation. Today, the process of innovation is closely linked to technological development, and it is no different in education and the school environment. We live in a world dominated by media communications and where digital technologies meet us at every turn. New media and new technologies are coming to the forefront of everyday life. According to Volk et al. (Volek et al. 2006) we can divide the media into:

1. primary (interpersonal communication, such as language);
2. secondary (overcoming time and space barrier, eg font, telephone);
3. tertiary media (for example, mass media - television, radio),
4. Quaternary media (digital internet technologies).

Thus, the media are not only a product, but, thanks to their users, become part of social processes and thus of education and learning processes. The company is developing technologically, economically, legally, but also mentally. Some scientists and theorists, especially in the field of media studies (Gerbner et al. 1986; Williams, 1990; McLuhan, 1991), fear that the development of some disciplines may not precede a mental shift. The course of the industrial revolution was very crucial for European culture, when inventors and scientists wanted to defeat the mountains, conquer the earth, and tame the elements. However, the company has come to realize that technology may not always benefit society as a whole in its global as well as local implications. We are just beginning to take a professional, scientific, and research interest in the effects of using new media, such as tablets, mobile phones, etc. Technology should ideally serve man, not man technology.

We mention here the term "media", resp. the so-called "new media" in relation to education. The term "new media" began to be used in the 1960s, when it was first used by media theorist Marshall McLuhan (McLuhan, 1991) to describe electronic media. Since about the 1970s, there has been talk of new media as a set of various electronic technologies with a variety of uses. The new media "are based on an electronic / digital platform, use computing power (processor), are interactive (respond to user stimuli), support communication, or at least direct feedback" (Pavlíček, 2007). Lister (Lister, 2003) names five principles that characterize new media as digital, interactive, hypertextual, dispersed, and virtual.

The role of teaching aids in teaching

In addition to his verbal and nonverbal communication with the pupils, the current teacher uses a wide range of teaching aids to communicate the content of the educational material and to verify the knowledge of his pupils. Of course, a tool in the form of applying teaching aids to teaching allows the use of more effective teaching methods. The advantage of teaching aids and tools is, in addition to living on the part of students, when they can manipulate objects or their models, work with images, etc., especially that students are not guided to simply accept knowledge but can intervene in it themselves. The actual concept of a teaching aid is defined in the pedagogical dictionary (Průcha, Walterová and Mareš, 2013) as: "a subject mediating or imitating reality, facilitating greater clarity or facilitating teaching", or in older literature (Kujal, 1967): "teaching aids are natural objects or objects imitating reality or symbols, which in teaching and learning contribute as sources of information to the creation, deepening and enrichment of ideas and enable the creation of skills in the practical activities of pupils, serve to generalize and master the laws of natural and social phenomena. They are used primarily to create conditions for a more intense perception of the learning material, to involve as many receptors as possible in the overall process, especially visual and auditory. "

Teaching is a complex and closely intertwined process affecting a person's personality in all its aspects. Teaching is generally characterized by the interaction of four components, which are (Maňák, 2003):

- teaching content, curriculum and its structure;
- teacher, teaching, ie arranging the curriculum for pupils, managing their learning activities;
- pupil learning, ie, the process of learning the curriculum by pupils;
- didactic resources, ie teaching aids, and technical equipment, enabling to streamline the educational process.

New media and interactive education

Interactive and multimedia teaching is a concept now well established in pedagogical theory, but less so in pedagogical practice. One of its goals is to make today's teaching process more attractive and efficient and to offer pupils new opportunities to acquire applicable knowledge and skills through their active activities. Interactive and multimedia aids are a means of bringing creative activities with play elements into teaching and thus making it more attractive and natural for students, more effective for teachers. However, emphasis needs to be placed on the fundamental difference between activities such as play and guided learning. In the case of use as a teaching aid, the term activity with game aspects can be used (Čáp and Mareš, 2001). However, learning and working activities differ from play in that they are about fulfilling duties, and conversely, when playing, the child plays only because he enjoys it. Severová (Severová, 1982) states that: "the main features of the game are an activity accompanied by joy and pleasure, the game serves learning, the game is not about achieving some goal and result outside it".

Concepts such as innovation, new media in combination with education are closely related to creativity. Fontana (Fontana, 2003) defines creativity as the ability to readily find new ways to approach problems and organize material. It is about creating ideas of any kind that are basically new, innovative. This novelty can be objective or subjective, and creativity can also be divided into these categories. The condition, however, is that those who created new ideas were previously unknown. In teaching, the pupil will primarily be subjective creativity, but from the point of view of the genesis of the creative personality, even with the subjective discovery according to Maňák (Maňák, 1996), a fundamental act will take place.

The main components of creativity undoubtedly include thinking, imagination, fantasy, imagination and intuition (Maňák, 2001). The creative student must be able into penetrate to the essence of the thing to understand the principle. In this context, we distinguish between low and highly creative type of student. Low-creative type tends to assign new information to hierarchically equivalent information, cannot categorize, deduce, find a summary concept, cannot affect relationships, and conversely, a highly creative person tends to include new information in a network of general and abstract concepts, has a cognitive system, is able to compare and deduce (Pařízek, 2000).

When we talk about interactive and multimedia teaching, we combine this teaching with an interactive whiteboard. The model of teaching using an interactive whiteboard and an interactive and multimedia textbook is currently a frequently used model in modern, innovative teaching. Dostál (Dostál, 2009) distinguishes the types of interactions in teaching with a multimedia textbook into "interaction between learning actors and interaction between actors and technical equipment", where the term "interactive teaching" is a broader concept than just working with an interactive whiteboard and multimedia textbook. Or not every work with an interactive whiteboard can be considered interactive teaching. In addition to the interactive whiteboard, other systems can also intervene in the process - various voting systems, tablets, and other elements enabling interactive input. Combining working with a multimedia textbook using an interactive whiteboard is one of the possibilities.

In this model, both pupils and the teacher work with the textbook, but also multimedia textbooks as a pupil's tool. In this model, the student works with the textbook independently or in parallel with the main projection of the textbook. Pupils are equipped with personal devices capable of presenting content and interaction in a multimedia textbook (netbook, tablet ...).

Modern digital technology thus completely changes the way we work and thus the educational process. The virtual reality industries come to the fore as relatively young but rapidly evolving pieces of information technology, creating the illusion of the real world by projecting an image into glasses or a helmet. The most important feature of virtual reality is its interactivity, which can perform tasks in real time according to the user's wishes. The user thus feels that he is directly in an artificial environment. Warthová (Warthová, 2016) points out the possibilities of using virtual reality in teaching, where teachers often have a problem enough to engage students, and so a solution is offered in the form of virtual reality. Many classes are now equipped with the necessary computer technology and students own a mobile phone, fablet, or tablet, which will allow the use of virtual reality, downloading the necessary application is then just a small thing. In addition to virtual reality, the term augmented reality can be found (Figure 1). According to Azuma (Azuma, 1997), augmented reality is only part of virtual reality, although it allows the user to see the real world and the virtual elements located in it on various layers. However, Takemuta (Takemuta, 1994) perceives augmented reality as a separate category of the technology and mobile industries, using some of the content used for virtual reality.

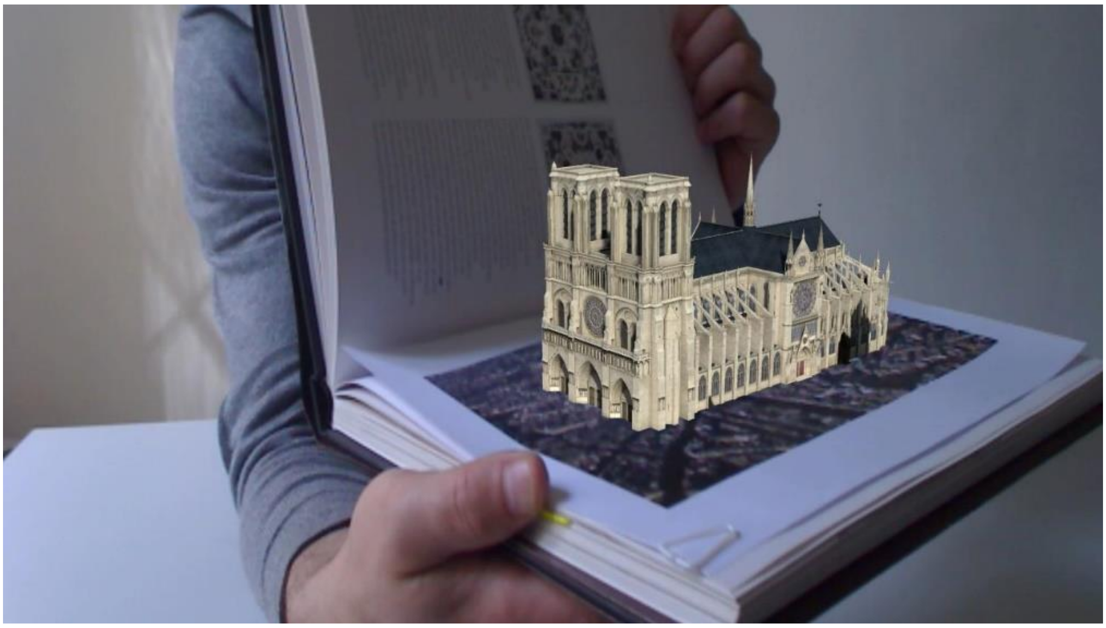

Figure 1 Example of augmented reality use (Truschka, 2014)

Augmented and virtual reality are used in many fields. According to a study by Steve Chi-Yin Yuen (Chi-Yin Yuen, 2011), students working with augmented or virtual reality understood the material much better than students using other educational aids (textbooks, educational software and videos). Augmented or virtual reality thus helps students to better understand the material and remember it for a longer period. It also improves group work and motivates pupils more, who then achieve better results. On the other hand, the disadvantage of teaching with augmented or even virtual reality is the loss of attention. Pupils may have a hard time getting used to new technology, which is often difficult to control. Observing virtual elements on the screen can lead to health complications such as headaches or eye pain. Unlike a book, text from the device screen is harder to recognize and read. Another disadvantage may be the rapid aging of the devices in conjunction with the more expensive acquisition costs of a new device (Chi-Yin Yuen, 2011). The use of augmented or virtual reality in education can be divided into five categories (Pelcová, 2012): books, games, so-called discovery-based learning, or learning based on discovery, object modeling and skills training.

It is not yet clearly defined procedures, methods, and goals for adequate use of virtual reality in education, much fewer other levels and tools such as artificial intelligence responding to different personality traits of students with different approaches to learning (Sedláček, 2016). We do not know the future in education, but we are already creating it today through digitization, virtualization, and the advent of artificial intelligence.

Education 4.0

In 2014, the Ministry of Education, Youth and Sports prepared the document Strategy for Digital Education until 2020. The strategy outlines the direction in which 21st century education should go in the Czech Republic. Apparent digitization, which enters many sectors, is also elaborated in the Industry 4.0 Initiative, a document issued by the Ministry of Industry and Trade of the Czech Republic in August 2016. The initiative aims to strengthen and maintain the Czech Republic's competitiveness during the so-called fourth industrial revolution.

According to the Digital Education Strategy until 2020, education should prepare pupils with a greater emphasis on information technology. The introduction of new subjects and fields of study is planned. All schools, regardless of focus, should learn knowledge about the systemic functioning of the Internet, the possibilities of its use at work, the benefits of applying new technologies of Industry 4.0 to the future development of job opportunities. School leavers should acquire the ability to adapt and take an active approach to the world, creativity, and a desire to continue their education.

According to research Assessment and Teaching of 21st Century Skills, the application of cognitive skills in the modern labor market is growing in importance. Pupils should be able to solve non-routine problems and learn to think systemically and non-systemically. Other necessary skills include intrapersonal skills (such as the ability to set goals and reflect on their achievement, or purposefulness) and interpersonal skills (the ability to cooperate, communicate, and negotiate with people not only from my cultural and linguistic background).

Results, Conclusions and Recommendations

Today, there is an inexhaustible number of teaching aids for various groups of educational areas and individual educational fields. However, these aids differ in their quality and quantity. In the preparation for teaching, the teacher must choose from a set of teaching aids on the basis of certain aspects determined by him, determined by the type of teaching and the content of the communicated topic. The choice is therefore the result of a certain evaluation and consideration of a number of factors that positively or negatively affect the educational process and its effectiveness. There are also tools in this area that help teachers with choice - according to Dluhoš and Vaníček (Dluhoš, Vaníček, 1976), the following principles can be followed, for example:

- we do not describe in a word what is obvious to the pupils from the aid,
- according to the type of aid, we will choose the didactic technique, which we will prepare so that the given aid will be implemented in the most efficient way, without time loss or, conversely, we will choose adequate teaching aids according to the available didactic technique,
- we activate the pupils and try to get as much information as possible from the aid,
- we choose the accompanying word in such a way that it directs the pupil's attention and his learning in the intended direction,

- we present the aid to the pupils only at the time when we want to focus attention on the given subject matter,
- where it is necessary to emphasize the complexity of phenomena, genesis, mutual relations and connections, the dynamics of the process, we leave the possibility for completing the aid during the interpretation,
- we choose the transmission channel according to the requirement for the efficiency of information transmission and interaction between the teacher and the student, but also in terms of mental hygiene.

These principles are only recommendations, which unfortunately cannot be fully generalized, especially regarding the complexity of the whole process of teaching implementation.

PLAGIRISM REPORT

Declaration Of Authorship

I do solemnly declare that I have written the presented research thesis by myself without undue help from a second person others and without using such tools other than that specified. Where I have used thoughts from external sources, directly or indirectly, published or unpublished, this is always clearly attributed. The presented intellectual work of this research thesis is my own. In particular, I have not taken any help of any qualified consultant.

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Increase in the Implementation of Digital Technologies in Teaching during the COVID-19 Pandemic on the Selected Czech Schools

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Abstract
Over the last five years, the possibilities and implementation of digital technologies in teaching have been strengthened in the Czech Republic. As part of the support of digital literacy, Czech education is undergoing a process of increasing the digital competencies of teachers and pupils in primary and secondary schools. The term "digital literacy" means a set of digital competencies (knowledge, skills, attitudes, values) that an individual needs to safely, confidently, critically and creatively use digital technologies at work, learning, leisure activities and participation in society. Their basic characteristic is the application/use of digital technologies in various activities, in solving various problems. This results in their variability over time, depending on changes of the way and extent of the use of digital technologies in society and in human life. During the COVID-19 pandemic, a number of teachers decided to conduct their teaching online. Among other things, the tasks and their fulfillment and control were given to the pupils electronically. The goals of the expected results of digital literacy were met very quickly and more than before. Particularly interaction through digital technologies, sharing and collaborating through digital technologies, acquisition of data, information and content from digital sources, creation of new digital content, appropriately chosen message format. Our contribution in the form of a research probe among elementary school teachers in two regions verified their rapid development, thanks to the closure of schools and the interruption of regular teaching.
Keywords: Digital literacy, teaching online, COVID-19 pandemic, Czech Republic

Introduction

Among teachers, their pupils and parents, especially on social networks during the period of optional school attendance or school closure, in the Czech Republic during the pandemic (see mzcr.cz), questions arose about the quality of alternative teaching, which took place online. Given that I have been working for a long time on a project dealing with the digitization of primary school education at the national level.

Project Support for the development of digital literacy (abbreviated as Digital Literacy) focuses on building educational and methodological support for teachers from practice for the integration of learning activities in teaching, which focuses on the development of digital literacy. 9 pedagogical faculties and the National Institute for Education are involved in the project. The aim of the project is to develop digital literacy in teachers and pupils of kindergartens, primary schools and secondary schools (see digigram.cz).

For the purposes of my paper, I conducted a research probe among primary school teachers on the topic: the development of digital literacy during the COVID-19 pandemic. I assumed that at the time of teaching only online, i.e. without the possibility of personal interaction between teacher and student, as well as students among themselves, there was a deepening and broadening of digital competencies of teachers and students, i.e. the natural development of digital literacy in education.

What is digital literacy? We understand digital literacy as a set of digital competencies (knowledge, skills, attitudes, values) that an individual needs to safely, confidently, critically and creatively using digital technologies at work, learning, leisure activities and participation in society. We understand digital competences as cross-cutting key competencies, i.e. competencies without which it is not possible to fully develop other key competencies in pupils. Their basic characteristic is the application / use of digital technologies in various activities, in solving various problems. This also results in their variability over time, depending on how the way and extent of the use of digital technologies in society and in human life changes (Růžičková, Fanfulová, et al., 2020).

Over the last five years, the possibilities and implementation of digital technologies in teaching have been strengthened in the Czech Republic. As part of the support of digital literacy, Czech education is undergoing a process of increasing the digital competencies of teachers and pupils in primary and secondary schools. During the COVID-19 pandemic, a number of teachers decided to conduct their teaching online. Among other things, the tasks and their fulfillment and control were given to the pupils electronically. The goals of the expected results of digital literacy were met very quickly and more than before. Particularly interaction through digital technologies, sharing and collaborating through digital technologies, acquisition of data, information and content from digital sources, creation of new digital content, appropriately chosen message format.

Method

For the purposes of this research, I assumed that As a result of the COVID-19 pandemic, the digital literacy of teachers and their pupils has developed. I verified the given assumption using a standardized questionnaire with open questions. I disseminated this electronically and through a standardized interview. In most cases, I had the opportunity to supplement the answers obtained during subsequent consultations with the respondents, both in the interview and in electronic communication. The obtained data were evaluated by a qualitative method of categorization of codes, which I obtained from transcribed or recorded interviews.

Open coding is an analytical process in which a researcher reads his or her records or recorded interviews line by line and identifies a variety of topics, ideas, or questions that arise from the record. The codes are additionally written notes in the text or on its edge - words to which we give a specific meaning according to the similarity of their use. These are stickers that we will use several times in the text for semantically similar parts (Emerson, Fretz, Shaw, 2011). We then classify these into new systems according to similarity or other internal context. So often dozens, sometimes also hundreds, of codes that arose from open coding, we assign to categories, according to similarity or other external context, categories are more general in meaning and their description gives the first interpretation in the research of data. (Švaříček, Šeďová, 2007, 221). The open coding process reveals not only categories, but also their properties and interrelationships. (Strauss, Corbinová, 1999, 48) The validity of the created categories and their properties is subsequently verified on the obtained data (Hendl, 2005, 247). (according to Gulová, 2013, 47–57).

Open coding is a technique for data analysis in qualitative research, which was developed within the method of grounded theory (according to Strauss, Corbinová, 1999). This technique is completely inductive. The result is a descriptive description of the collected data (compare Švaříček, Šeďová, 2007, 222).

Using open coding and categorization, we analyzed and categorized respondents' opinions as presented below. There were 12 interviews. The respondents were gender balanced, the age categories were in favor of young teachers up to the age of thirty, but all age categories were represented by at least two respondents.

Findings

1.How did you implement distance learning during the closure of your school due to the COVID-19 pandemic? What digital technology, digital resources, etc., you are using in distance learning? What role did the school management play in the chosen way?

Teachers were not united in the use of digital technologies. They used wide range of educational applications.

They often used existing systems for basic contact with parents and pupils, such as the school's website or the "Bachelors" or " Edupage" program. Some teachers were content with e-mails with the pupils' parents, others were intensively looking for ways to achieve quality teaching with satisfactory results for the pupils. The direct communication with pupils was gradually used by many of them. Some teachers were not satisfied with the help of electronic communication, consultation through Skype or chat, other times the school management decided to mediate teaching through recorded videos. Direct teaching through video conferencing filled the lack of interaction between teachers and their students the most.

They most often used Microsoft Teams or Zoom for video conferencing, while others used Google Meet. In proportion to the more frequent implementation of online face to face teaching, teachers 'satisfaction with the implementation of distance learning and with pupils' results grew.

In general, the Whats app, Facebook, Skype, Youtube, Google Classroom and other applications were also used in distance learning with students. School management preferred support and regular online lessons, especially for major subjects (languages, mathematics, science), and others (civic, art, music) were often left out.
If online teaching took place at the school, it was compulsory for the pupils, the school management informed the parents about it and for the children, who could not participate in it primarily for technical reasons, the teachers prepared extra tasks.

2.Have you used any of the above procedures in your teaching before?
In the past, most teachers did not use applications enabling, for example, video communication with pupils. Although electronic communication with parents and their students is already a standard part of mutual interaction, it usually takes place in the form of email, the Bachelors program, electronic student books, school or classroom websites. Teachers mostly share assignments, projects, presentations from teaching, etc. with their pupils. Thus, a novelty for pupils and teachers was online communication, either in the form of Skype consultations or video conferences.

3.Do you plan to apply any of the above procedures in your teaching in the future?
In proportion to the success in using the new possibilities of online communication with pupils, teachers talk about very easy operation, simplicity and variability in video-conferencing options, there is a growing desire among teachers to use these proven technologies for distance learning , for example to support students who will not present at school for health reasons. E.g. the interpretation of the new curriculum, the explanation of the curriculum at the time of their illness and the like.
Most of the interviewed teachers expect to use the new possibilities of distance education in future practice as well.

4.Briefly describe whether and how you think you expanded your digital literacy and digital educational content during COVID-19 pandemic.
There is a split among teachers as to whether or not they have expanded their digital competences and digital teaching content as a result of the COVID-19 pandemic. Some of them do not allow for the expansion of their competencies, and do not intend to use more new technologies in teaching in the future. Others, especially those who realize that even in distance learning they could accompany their students and teach them new material and expand their abilities and skills, especially in relation to digital literacy, appreciate the newly acquired experience, newly used applications and electronic materials that prepared for pupils and, for example, when testing pupils, they count on their use in everyday teaching.
"I encounter IT technology daily in my work. I use an interactive whiteboard, PC, website for teaching. However, I expanded my digital competencies to the maximum in the area of conducting video conferences, which I started using as a result of the pandemic for the first time."
"We have all expanded our skills and abilities in working with a PC or searching for new sources of information on the Internet, both we teachers and our students and their parents."

5.Briefly describe whether and how according to your opinion, your pupils extended their digital literacy. Do you see the difference in distance teaching at the beginning of the quarantine and today?
With a few exceptions (especially senior teachers), they agree that during the COVID-19 pandemic, their pupils clearly extended their digital literacy. Some speak of "unbelievable improvements." Pupils, especially first graders, were initially afraid of technology and their online outputs, but over time they not only learned how to write an email, but also lost the shyness of speaking into a microphone and showing up on a webcam. If parents needed to help them open files, write a text document, send an email when using distance educational applications at the beginning, they were already experienced at the end of distance learning. The youngest

students learned to turn on the computer themselves, search for the necessary pages on the Internet, connect with a group or connect headphones.
"Pupils have definitely extended their digital literacy. There was a big difference between the first and last online lesson, between the first and last quiz entered."
Pupils learned to work independently, to search for information on the Internet better, not to be satisfied with the first source. Most pupils were actively involved in online and video conferencing. They also learned to respect each other, even the youngest, they tried to let one speak and the others listened, they tolerated each other.
"During the video teaching, I was very pleasantly surprised by how the students adapted and the learning did not cause them difficulties. In my opinion, they became fully aware of the wide range of possibilities of IT technologies in practice, even at a relatively young age of 7 years."

6. What do you see as the biggest advantages of distance education during COVID-19 pandemic?
It is in the development of digital literacy of pupils and even the teachers themselves. Another important thing is that students, perhaps after a long time or for the first time in their lives, are mostly looking forward to school! The student is mainly looking forward to his classmates, but of course also to his teachers. Mutual interpersonal contact was also what both teachers and students lacked the most at this time.
Teachers also often perceive positively that parents knew what their job was like when they took on the role of teachers for their children on a daily basis, as online teaching never replaced the whole school.
"Pupils have learned to be more independent, and many parents have become teachers for a given time and tried out what the profession entails."

7. What do you see as the biggest disadvantages of distance education during COVID-19 pandemic?
Indeed, all of the teachers interviewed met a pupil or pupils who did not communicate with them or lost contact with them during optional schooling. These were mainly pupils from socially and economically disadvantaged families, but not only them. Some students simply could not be persuaded to cooperate and their parents did not reply to emails from teachers or school management. In case of non-cooperation of the pupil and his family, its final evaluation is very difficult.
"Distance learning for many students was also linked to their family background. Pupils from non-stimulating backgrounds who did not participate in teaching during the pandemic will face these differences in the following school year and it will be very difficult for them to "catch up" and reintegrate into the mainstream education regime."

Results, Conclusions and Recommendations
From the results of my research, although it was a small probe into the issue, it is clear that my assumptions have been fulfilled. As a result of the COVID-19 pandemic, the digital literacy of teachers and their pupils has developed (compare Participace21.cz).
Digital literacy, according to the plans for the development of education in the Czech Republic (see msmt.cz), expected learning outcomes, which were fulfilled very quickly in 2020, according to the results of a research probe, at a number of schools, namely:
- Interaction through digital technologies;
- Sharing and collaborating through digital technologies;
- Acquisition of data, information and content from digital sources;
- Creation of new digital content, appropriately chosen message format.

As a result of the COVID-19 pandemic and the implementation of only distance learning in primary schools in the Czech Republic, the digital competencies of teachers and pupils have been deepened and expanded, i.e. the natural development of digital literacy in education. By digital competencies we mean primarily the search for information, its sharing and communication in the digital world (Růžičková, Fanfulová, et al., 2020).

In the light of the above conclusions, it would be appropriate to ask: Is this phenomenon global? How did distance learning take place in other countries? Will pandemics permanently change education and training with the help of modern technologies?

Plagiarism Rate: 0 %

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An Examination of The Studies That Measure The Effects of The Use of Learning Management Systems on Learners

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Abstract

For nearly fifty years now, the link between computers and learning methods has reached a point that cannot be considered separately from each other. It can be said that this connection made a very important breakthrough with the increasing technological change and development. The fact that learning environments reach every part of the world in an economical, quality and sustainable manner thanks to the internet is a clear sign of a new break in education methods and access to information. While Learning Management Systems emerge at this point, they aim to ensure that learning environments are implemented in a better quality, planned and organized manner. Many scientific studies have been conducted on these e-learning environments, which are supported and developed by content management systems. Especially studies investigating the various effects of the use of these systems on the learner are important for educational sciences. This research is a theoretical study conducted to examine the studies that measure the various effects of Learning Management Systems on the learner. Studies that measure the essence, basic principles, basic concepts and various effects of Learning Management Systems on the learner are presented based on the information in the literature.

Key words: Learning management systems, e-learning, lifelong learning

Introduction

Learning Management Systems (LMS)

Schools, universities, large institutions and businesses in Turkey and in the world are trying to benefit from e-learning opportunities to reduce costs, enrich training methods and contents, increase the work efficiency of their employees, diversify the recruitment stages(Itmazi, Gea, Paderewsk, & Gutierrez, 2005; Hrmo & Kucerka, 2011).

E-learning is a broad application process that includes computer-based learning, web-based learning, virtual classrooms and cooperation of digital technologies (Uşun, 2006: 118). It is also necessary to consider mobile phone or tablet platforms. Mobile learning management systems have become an important part of this process nowadays. They started to emerge with the application of learning management systems to mobile devices. Learning management systems play an important role in the realization of e-learning activities in a more systematic and planned manner (Duran, Onal & Kurtuluş, 2006; Dalsgaard 2006).

Although it appears in the form of education or training management systems, it has found its place in the literature of academic research in Turkey as the concept of learning management system (LMS) in general. Previously, concepts such as computer-based instruction (CBI), computer assisted instruction (CBI), computer assisted learning (CBL), internet-based learning (IBL) were at the forefront, LMS is now software that enables the management of learning activities that include all of them. Another important feature of these teaching software is that they are prepared in accordance with teaching-learning principles. They provide functions such as presenting learning material, sharing and discussing the presented learning material, managing lessons, taking homework, taking exams, providing feedback on these assignments and exams, organizing learning materials, keeping student, teacher and system records, and receiving reports (Morten, 2002) . It also supports video conference (providing instant mutual image and sound transfer). With this application, a remote virtual classroom application with online chat, file sharing (.pdf, .swf, .doc, .docx, .ppt, etc.), whiteboard and screen sharing can be performed at a specified date and time.

LMS can also be defined as a software or web-based technology that enables planning, evaluating and applying e-learning activities, which is one of the important education methods of our age (Aydın & Biroğul, 2008). LMS, which is the heart of the efforts made for the execution of the whole e-learning process, are multi-layered and web-based programs that enable the delivery of educational content and components to the learner. They have been developed to ensure that all activities of the trainer and learner from a single source are fast, smooth and functional.

Learning management systems (LMS) have hundreds of types, mainly commercial and open source (OER). Those developed for commercial purposes provide usage services by licensing. Open source code is an application development method in which the code information of the developed software can be easily accessed and the desired changes can be made on the software (Matthew, Clifford & Stephen, 2014). It can be said that open source applications are more preferred due to the lack of licensing fee and the capacity to be customized without permission. Moodle, ATutor, Dokeos, Bodington, Fle3 Learning Environment, Claroline, Docebo, eStudy, Drupal, DotLRN, eFront, Sakai, OLAT are the most widely used examples of open source LMSs (Altınparmak et al., 2011). As of today, Moodle alone has reached 204 million registered users on more than 158000 sites in 245 countries (https://stats.moodle.org Accessed: May 2020).

Malikowski, Thompson, and Theis (2007) examined the intended use of LMS by teachers and observed that the primary purpose is to transfer content to the learner. Content development and presentation process has an important function besides all other features of LMS. LMSs stand out as a platform for presenting them, since they do not have a system for producing direct content (test generation, rating, etc.). Contents are mostly developed as a separate system and adapted to LMS. These are called learning content management systems (LCMS). System manufacturers use the concepts of LMS and LCMS interchangeably (Ozan, 2009: 4). The production of these systems takes a lot of effort and time, and the fact that the content produced is only according to a specific LMS format is a cost and time waste. Standard development efforts have emerged to prevent this. One of them is the "Shareable Content Object Reference Model" with its English abbreviation SCORM. It is a kind of universal learning content management system standard. The production of the content produced according to the predetermined SCORM principles enables this content to be adapted to hundreds of learning management systems at the same time. In this way, SCORM provides the benefits of interoperability, re-usability, manageability, accessibility, durability and scalability to e-learning environments. A study performed in compliance with these principles can be used for a long time. It is also easy to move, accessible from anywhere, and the same content can be accessed many times (Deperlioğlu & Sarpkaya, 2009).

2- Method

In the literature review conducted in the research, a chronological review were carried out on accessible master's and doctoral studies obtained from the national thesis center using the keywords "learning management systems", "the effect of learning management systems on learner", "e-learning". In addition, articles published in academic journals from Elsevier, ResearchGate, Academia between 2000-2020 were discussed. In the review, only one of the studies was reviewed among those were converted from master's or doctoral thesis to articles. The titles and summary parts of the articles and theses were reviewed and the works on the effects of learning management systems on the learner were included in the study. By reviewing the relevant researches, findings and conclusions of the research, results such as learning management systems and the contribution of the use of these systems to the learner in the learning process and their effectiveness compared to the classical learning methods were examined.

3- Findings

The research findings will be analyzed and presented in two dimensions. In the first dimension (Table 1), studies measuring the perception levels of teachers and learners towards using learning management systems were examined.

Table 1 - Studies Addressing the Use of LMS from the Perspective of Teachers and Students

Teachers' Views	**Authors**
Functionality, rich content, not compatible with the curriculum, should be cleansed from standard lectures, the infrastructure should be reinforced,	Kurt, 2019; Şahin and Erman, 2019;
Teamwork increases motivation and participation.	Sel, 2017;
Students' Views	**Authors**
Suitable for learning style, appropriate content	Oğul, 2019;
Freedom and usefulness in learning,	Bahçeci and Elçiçek, 2017; Mısırlı, 2007;
Content diversity is important.	Sezer, 2019; Dursun, Kırbaş and Yüksel, 2015; Salman, 2013;
Use to prepare for exams	Demir, Özdinç and Ünal, 2018
Satisfaction and motivation.	Raua, 2008; Mısırlı, 2007;
Social network	Yuen and Yuen (2008), Balat, 2014;
Attracting attention, increasing interaction with course contents, thinking and commenting, increasing motivation and participation, ease of establishing comfortable and multiple communication	Kaban, Karaman, Özen, Yıldırım, 2009;

In the second dimension (Table 2), studies that examine the effects of learning management systems such as achievement and motivation are focused.

Tablo 2 – Findings of the Studies Examining Various Effects of LMS Usage on Learners

Dimensions	**Effects**	**Authors**
Positive Effects for the Learner	*Academic success, motivation, attitude towards the lesson*	Aşıcı, 2018; Bahçeci and Elçiçek, 2017; Oğul, 2019; Sezer, 2019; Özbay, 2015; Özgür 2015; Türker and Yaylak, 2011; Wang, 2017; Yılmaz, 2012; Acar, 2019; Ermiş, 2012; Özgür and Tosun, 2010; Yıldız, 2011; Şahinoğlu, 2012; Aydınözü, Sözcü and Akbaş, 2016; Ünal and Hastürk, 2018; Çavuş and Doğan, 2009; Korkmaz, 2010; Küle, 2012; Saraç, 2014; Elçiçek, 2015; Tekin, 2007; Başoğlu, 2010; Aydın, 2011; Yıldırım, 2012; Mcconatha, Praul and Lynch, 2008; Chena and others., 2008; Fetaji and Fetaji, 2010; Balki, 2000; Teyfur, 2009; Kang and Shin, 2015;
	Self-learning, teamwork, more participation, permanent learning	Oğul, 2019; Sel, 2017; Türker and Yaylak, 2011; Gülbahar, 2005; Wang, 2017;
No Effect on Learner	*Academic success*	Yerli, 2018; Köksalan, Sevindik and Olcay, 2011; Baltacı 2009; Tuncer 2007; Balat, 2014; Şahinoğlu, 2012;
	Academic motivation, attitude towards e-learning,	Sezer, 2019; Tayşı 2016; Birişçi, 2013; Demirer, 2009;

4. Result and Discussion

When the literature is examined, learning management systems are systems that constitute the direct mechanics of concepts such as computer-aided learning / teaching, internet-supported / based teaching, web-based learning / teaching, mobile learning / teaching, digital learning / teaching, e-learning since the beginning of 1990.

Many researches have been carried out concerning these themes in the last few decades. Although web, computer and internet are mentioned in the names of these studies, they all use a learning management system (LMS). LMSs are designed according to education and training methods. The main purpose of all of them is by making learning more effective and attractive, to increase the success, motivation and attitude of learners to the lesson or learning by using digital opportunities. In doing so, it is also tried to create advantages such as lowering costs, accessibility, sustainability, reaching large masses and ensuring participation.

The starting point of our study is to examine whether LMS, which has been increasing its place in our lives day by day for the last twenty years, serve its main purpose in this process; and to understand whether the use of LMS in the learning process really brings something better to the learner compared with the classical learning processes. In the light of the findings obtained when we examine the researchers conducted on this basis in the last twenty years; it can be said that the learning processes carried out using LMS systems are more successful in terms of "academic success, motivation, attitude towards the course" compared to classical learning processes (Aşıcı, 2018; Bahçeci and Elçiçek, 2017; Oğul, 2019; Sezer, 2019; Özbay, 2015; Özgür 2015; Türker and Yaylak, 2011; Wang, 2017; Yılmaz, 2012; Acar, 2019; Ermiş, 2012; Özgür and Tosun, 2010; Yıldız, 2011; Şahinoğlu, 2012; Aydınözü, Sözcü and Akbaş, 2016; Ünal and Hastürk, 2018; Çavuş and Doğan, 2009; Korkmaz, 2010; Küle, 2012; Saraç, 2014; Elçiçek, 2015; Tekin, 2007; Başoğlu, 2010; Aydın, 2011; Yıldırım, 2012; Mcconatha, Praul and Lynch, 2008; Chena and others, 2008; Fetaji and Fetaji, 2010; Balki, 2000; Teyfur, 2009; Kang and Shin, 2015).

There are also studies that conclude that the use of LMS in the learning process has no effect on "academic achievement, motivation, attitude towards the course" compared to classical learning processes (Yerli, 2018; Köksalan, Sevindik and Olcay, 2011; Baltacı 2009; Tuncer 2007; Balat, 2014. ; Şahinoğlu, 2012; Sezer, 2019; Tayşı 2016; Birişçi, 2013; Demirer, 2009). However, the application conditions of the studies and the effectiveness of the LMS system may also have influenced these results.

It can also be said that learning processes with LMS has a positive effect on qualities such as "self-learning, teamwork, more participation, permanent learning" (Oğul, 2019; Sel, 2017; Türker and Yaylak, 2011; Gülbahar, 2005; Wang, 2017). Sel (2017), on the other hand, examined the relationship between the uses of LMS in the education process in terms of teachers, and stated that teaching with LMS increased "teamwork and motivation". It has been determined that features such as "functionality, rich content, compatibility with the curriculum, being free from standard lectures, and reinforced infrastructure" are also voiced by the instructors in LMS systems (Kurt, 2019; Şahin and Erman, 2019).

When we look at the perception of the students regarding the use of LMS in learning processes; the benefits of LMS usage are "Suitable for learning style, content suitable" (Oğul, 2019), "freedom and usefulness in learning" (Bahçeci & Elçiçek, 2017; Mısırlı, 2007), "content diversity" (Sezer, 2019; Dursun, Kırbaş, & Yüksel, 2015; Salman , 2013), "use to prepare for exams" (Demir, Özdinç & Ünal, 2018), "satisfaction, increase motivation" (Raua, 2008; Mısırlı, 2007), "social sharing opportunity" (Yuen & Yuen, 2008; Balat, 2014), "attracting attention, increasing interaction with course contents, thinking - commenting, increasing motivation and participation, ease of establishing comfortable and multiple communication" (Kaban, Karaman, Özen, Yıldırım, 2009).

It can be said that with the widespread use of LMS and further development of LMS, the learning processes will become more effective than the classical education process. On the other hand, it has been observed that LMS, which were used as an alternative in the education process until the writing of this article, ceased to be an alternative learning method in schools, universities and many other institutions with the Covid-19 pandemic process, and started to be used as a basic learning method.

Plagiarism Rate = 6%

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INTERNATIONAL CONFERENCE ON LIFELONG EDUCATION AND LEADERSHIP FOR ALL

Sustainable Schools to Respond the Challenges in the New Era

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Abstract

Rapidly growing population and developing technology in the 21st century caused the rapid reduction of natural energy resources in the world and environmental problems turned into an important threat for future generations. In order to minimize the consumption of natural energy resources and protect the natural environment, the United Nations, the world's most important international organizations and scientists emphasize the importance of sustainable development. In this context, a global road map has been designed to create environmentally conscious societies with sustainable development that can guarantee the welfare of the current generation and future generations. Considering that these goals, consciousness and responsibility can only be gained through education, the period between 2005 and 2014 was declared as the Sustainable Development Oriented Education Period by the United Nations. The Sustainable Development Oriented Education (SGE) approach aims at "holistic and social change". A sustainable school, with its building and daily practices, prepares its students for a sustainable life-long life throughout the education and training process, and aims at social change and transformation by creating a sense of consciousness and responsibility in individuals in order to prevent the destruction in natural resources and the environment. Sustainable schools, which form the basis of sustainable development, provide a reduction in operating costs, an increase in teacher performance and satisfaction, an increase in building life, a reduction in environmental impacts and a change in individual and social habits. This research is a theoretical study on sustainable schools. The essence of the approach, its basic principles and basic concepts are presented based on the information in the literature.
Keywords: Sustainability, sustainable development, school, society, education

1. Introduction

Incedayı (2004) recognizes sustainability as basically a reform process in the mind, but says, "like any thought process, sustainability requires a political choice or attitude. Today's environmentally unsustainable consumption patterns will remain an empty goal of a sustainable environmental inquiry unless they are changed on a political, economic and cultural basis."he expressed it with an approach in the form of.

Sustainable design is evaluated according to the benefit and performance of the product in the period from production to completion of its life. In this context, there are criteria that a sustainable design should have. These criteria include minimizing waste, being renewable, saving heat and energy, ease of maintenance and easy installation, etc. (Tavşan and Yanılmaz,2019).

2. History Of The Concept Of Sustainability

Sustainability the concept of' Sustainable ' was first defined in the Brundtland report prepared by the world Commission on Environment and development in 1987 as "meeting today's needs without depriving them of the ability to meet the needs of future generations" and has become a phrase used worldwide with this definition. Then, at the global conference held in Vancouver in 1990, the International Institute for Sustainable Development was established as an organization to carry out the function of developing international public policies (IISD, 2012).

Subsequently, a global action plan for Sustainable Development was determined at the World Summit in Rio de Janeiro in 1992 (IISD, 2012).By 2000, at the Millennium Summit in New York, concrete goals adopted by all world leaders were set to combat global problems, and these goals were defined as Millennium Development Goals. (IISD, 2012; UN, 2000).

In 2001, at the initiative of UNESCO, the dimension of cultural diversity was recognized as one of the key elements of sustainable development, thus setting global goals for the protection and maintenance of cultural diversity and cultural heritage around the world (UN, 2001). One of the key cornerstones of the priority given to sustainable development is the United Nations Summit held in Johannesburg in 2002. At this summit, the period 2005-2014 was declared as the UN Decade of EducationforSustainable Development and the importance of education policies, plans and programmes to serve this purpose was emphasized (IISD, 2012; OECD, 2008; UN, 2002).

In 2010, a Biodiversity Convention was signed at a conference in Nagoya, Japan, and the period between 2011-2020 was declared as the United Nations biodiversity period (UN Decade on Biodiversity).

In 2012, a new summit called Rio+20 was held in Rio de Janeiro, where thousands of participants from government representatives, the private sector and non-governmental organizations came together. At this summit, the emphasis on sustainable development for a sustainable future was reiterated and the whole world was invited to cooperate for this purpose (IISD, 2012; UN, 2012).

Finally, at the United Nations Sustainable Development Summit in New York in September 2015, Global Goals for the post-2015 period were discussed and the 2030 Agenda was set.

3. Principles Of Sustainable Development

Sustainable development process not only comprises material development leading to protect environment, but also comprises social, economic and intellectual development of human all over the world. The essence of sustainable development depends on some basic principles (Czuba, 2020; Du Plesis, 1998):

*Ecological:*Elimination of the treats to environment such as reducing environmental pollution, protecting human health, sustainable resource utilization, protecting ecological diversity, preventing damage to the cultural environment and efficient use of natural resources.

*Economic:*Using sustainable economic technologies and approaches that do not harm to environment and sustainable economy such as ownership of the domestic economy, ensuring inter-communal justice, ethical treatment of investment policies, equal distribution of profit and cost, avoiding inequality in the exchange system etc.

*Social and humanitarian:*Focusing on the foundations of human social development concerning culture, security and education with an emphasis on the issues such as enabling positive development of quality of life, ansuring cultural integrity, realization of social justice in society, increasing individual self-confidence, encouraging nations and individuals to participate actively in all international decisions, giving opportunities to the community and ensuring the empowerment of the public.

4. Sustainable School Buildings And Criteria

Currently, rapid population growth and urbanization, as well as developing technologies and growing needs, lead to rapid depletion and destruction of natural resources on earth due to global threats. This situation, caused by the onset of environmental problems, has made it necessary to conduct research on the conservation of Natural Resources. During these studies, it was determined that the concept of ‘sustainability’ is important. In this context, one of the sectors where sustainability is most applied has been the construction sector (Tavşan and Yanılmaz,2019).

The effort to create sustainability awareness in individuals from an early age and the desire to leave a livable world to future generations has raised the sustainability of educational structures. Projects implemented in accordance with these goals are of particular importance as symbols that enable society to gain awareness of sustainability. In this context, “education for sustainability” programs are included from preschool education in order for individuals to gain this perspective at an early age. In addition to being a place where theoretical knowledge is gained, it was thought that educational structures should be a laboratory where achievements turn into experience. Prakash and Fielding (2007) stated, “a dynamic model describing sustainable design, architecture, engineering, construction, environmental science and harmony with nature in a school environment is an excellent learning tool."he stressed that schools have a very important mission in this regard (Şahin and Dostoğlu, 2015). Educational structures to be designed in this direction must have certain criteria.(Tavşan and Yanılmaz,2019) These criteria can be categorized as follows in general (Sustainable Architecture, 2015):

- Suitable for the land to be selected for the education building (it will have the least negative impact on the environment
- Have a comprehensive transport that least pollutes the ecosystem (must start at the site selection stage),
- Minimization of building Life Cycle (construction, operation, maintenance-repair, demolition) costs,
- Passive systems created to reduce the energy needs of the building (greenhouses, skylights, heat-storing walls, solar chimneys, etc.) and active systems (solar collectors, photovoltaic systems, etc.) integration into the structure,
- Having roof gardens and natural weather systems, having a system suitable for rainwater collection, positioning it to receive sufficient daylight, using local and ecological materials in the construction phase,
- Having a good indoor air quality and cycle and having criteria suitable for sustainability such as acoustic comfort,
- Suitable for reuse of materials to be used during the construction and construction-repair phase of the building (effective management and reduction of waste).

4.1 Effective Use of Daylight

Effective use of daylight in schools is of great mental and psychological importance for children who spend most of their time at school. It has been proven by research that sunlight initiates vitamin D synthesis in the skin, accelerates enzymatic processes in metabolism, increases hormonal activities, and strengthens central nervous and muscular systems (Kayıhan and Tönük, 2011). Children are 20% faster in mathematics study and 26% faster in reading in classrooms that use daylight effectively (Murphy and Thorne, 2010). In another comprehensive study, it is defined that students in classrooms with natural light from the roof and windows are 19% more successful in reading and 20% more successful in standard tests than those in classrooms with the least amount of light (Gelfand and Freed 2010). It is emphasized that one of the most influential factors on students' learning quality in schools is daylight.

The first method of using daylight effectively in educational buildings is the correct positioning of the school building. Departments where daylight is less needed should be positioned to east and west facade of the building whereas classrooms, corridors and recreation areas that need to benefit from daylight in the most efficient way should be positioned towards the south facade. The use of skylights in classrooms is emphasized as a method that will significantly benefit. Ceiling windows both prevent glare and allow the light to spread effectively (Demir, 2012). Sunlight should be controlled with light breakers in windows and shading elements on windows. The ceilings of the classrooms can be designed with a slight inclination in order to optimize the natural light entering through the light breakers (Kocabaş and Bademcioğlu, 2016).

Since the excessive amount of sunlight will cause glare, as a precaution, the "light shelf" application can be used to ensure a balanced distribution of the light. In order to use sunlight efficiently and controlled on the interior and exterior, solutions such as solar shading panels on the exterior, light shelves, shading panels and skylights are used. Efficient use of daylight is also important in terms of minimizing the energy use required for electricity and heating in school buildings. In small applications, solar-based systems (photovoltaics) alone provide competence (Prakash and Fielding, 2007). It is possible to make use of different surface options such as canopies and shades to maximize photovoltaic capacity. In this way, energy savings are achieved and a sustainable design approach is contributed.

5. Examples Around the World and Turkey

5.1. Piri Reis University Campus

Piri Reis University in Tuzla is one of the two schools from sustainable university, which comes to mind in Turkey. Coating material wasn’t used much in the structure.Instead, exposed concrete with the necessary insulation applications was preferred.Corten sheet plates were used on the south facades of the blocks.With these plates, both privacy, protection from overheating, and prevention of ultraviolet rays are provided.The gardens and courtyards between the blocks placed parallel to the shore were protected from the wind.In addition, thanks to this settlement, it has provided maximum benefit from daylight (Yeşildaş, 2017).

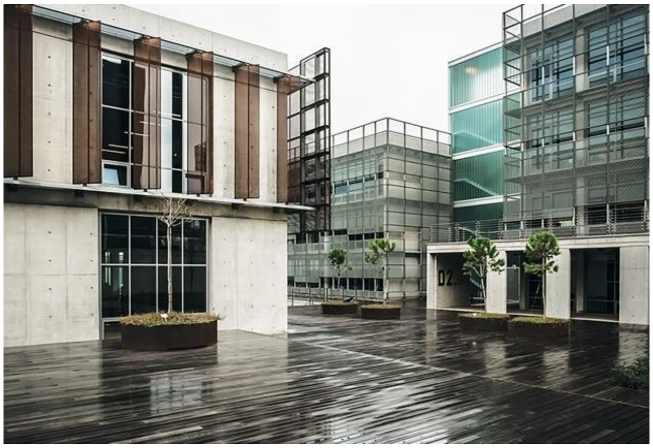

Figure 1: Piri Reis University Campus

Figure 2: Piri Reis University Campus

5.2. Cihangir College Bahçeşehir Campus

Carpet, linoleum and vinyl coating systems that do not contain harmful chemicals are used on the floor.Thus, harmful chemicals and environmental damage have been avoided.At the same time, linear LED lighting elements were preferred in the projectand rainwater was collected and used in garden irrigation, toilets and reservoirs (Yeşildaş, 2017).

Figure 3: Cihangir College Bahçeşehir Campus

Figure 4: Cihangir College Bahçeşehir Campus

5.3. Ege University Container Park

The Container Park, which was planned as an R&D center and hosting international companies, was created by transforming 35 second-hand containers.

The 12 containers brought to the university area were placed without damaging the natural texture and trees of the land. Settlement on the land was put into practice by making use of the shade of the trees, taking into account the wind direction and the position of the sun rays.

In addition to recycled materials, natural materials such as local stone and cork were also included in the project.Energy savings have been achieved with solar coated facade systems and effective insulation systems. The modular system is based on the project (Yeşildaş, 2017).

Figure 5: Ege University Container Park

5.4. SidwellFriends School

Sidwell Friends School is a comprehensive transformation project completed between 2001-2006.In Kieran's school design, rainwater is collected on a green roof and transported through gutters to the biological pond, rain gardens and water tanks.From here, it is recycled as gray water inside the building.The wetland created in the courtyard of the school contributes to gray water by recycling all the wastewater of the building, thus achieving 94% water savings.

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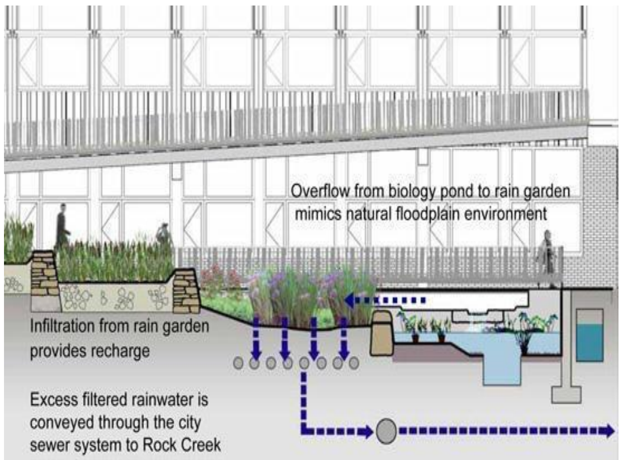

Figure 6: Sidwell Friends Okulu Water Conservation Systems

Cedar wood material is preferred in the facade system.While this material provides natural ventilation, it also prevents rainwater from entering.In addition, this systemwhich provides natural lighting, can balance the amount of daylight coming during the day.The school has a photovoltaic panel application and a solar chimney system.In this way, a 5% saving in energy expenditures was achieved.An electronic dashboard shows how much each student tries to reduce carbon emissions by using less energy.

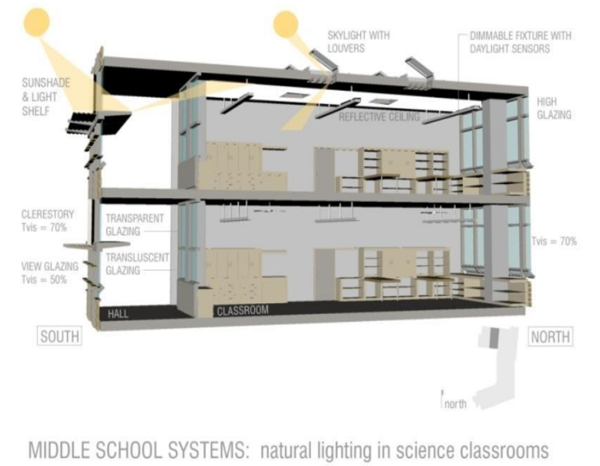

Figure 7: Sidwell Friends School Lighting Systems

5.5. Austrian Vocational School

This school was established on a land intertwined with nature.The architects of this educational building in Viennapreferred glass as a building material to integrate inside and outside. Lighting and natural ventilation is provided thanks to green gardens and foyers.

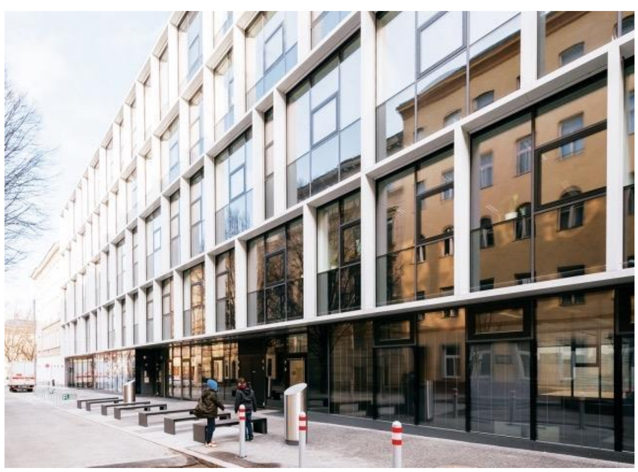

Figure 8: Austrian Vocational School

5.6. France Saint-Denis Kindergarten and Primary School

Saint-Denis has a co-education system.When viewed on the plan plane, six main sections resembling a clover structure can be seen.Clover shape has increased the power of communication between spaces.

Figure 9: France Saint-Denis Kindergarten and Primary School

6. Conclusion

Sustainable structures are of great importance for future generations to continue their lives in a healthy world. Many issues such as effective use of natural resources, utilization of renewable energies, selection of recycled products, use of materials that do not harm nature, and establishment of water protection systems are considered within the scope of sustainable design. Practices carried out within this framework are also important in terms of raising awareness in the society about sustainability. Raising awareness about sustainability is now attached to great importance in education, and "education for sustainability" programs are included in preschool education in order for children to learn the gains of this perspective at an early age. As a supporter of this understanding, it is thought that educational structures themselves should be a laboratory where theoretical knowledge taught in schools can be experienced. In order to achieve this, the principles that should be considered within the scope of sustainable construction for school buildings were investigated in our study. In this study, the importance of sustainable design as a learning tool is emphasized. Important issues in sustainable school design such as utilization of natural light, heating, cooling and ventilation methods, wind energy, water conservation and material selection were investigated. Although there are studies about this phenomenon in the world and in Turkey, it is seen insufficient and the steps to be taken for this sustainability should be increased. In recent years, the number of the studies on this subject have increased, but practice and research towards more steps need to be taken. In this respect, it is aimed to provide a helpful resource for sustainable school designs with this study.

Plagiarism Rate = 5%

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Changes Based Learning by Members of the Structure (Organization)

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Abstract
The research is dedicated to new building and maintaining facilities as well as complicated open management systems' maintenance. The goal of the study is to develop a procedure to measure a loyalty program before and after the implementation thereof. This goal is substantiated by the need to prepare an expert in the domain of loyal organisation guidance. Setting of the study′s goal is formulated in a context that allows developing a procedure for the assessment of readiness of an expert. Aside from providing an effective expert training program, such procedure also gives experts an efficient tool for instant current assessment of predisposition of an organisation to loyalty or the lack thereof. These are conceptual provisions and methodological foundations that allow to eliminate conflicts arising in the process of solving the tasks and to provide a link between the monitoring of prospective circumstances and the analysis of the current organization′s position.
Keywords: Methodology, monitoring, instability, programme

Introduction

A new approach for monitoring the state of a company, carried out at time intervals of various durations, is proposed. The developed diagnostic toolkit uses unified business information that allows receiving timely reliable conclusions about the stable functioning of a company. If signs of instability are found out, a large-scale programme of changes is proposed that is carried out at all the levels (chain management system) of the management system, including the redistribution of organizational authorities (powers of authority), This is achieved by revealing the contradictions that exist under the open system conditions with the simultaneous existence of several objects. Their existence is caused by the traditional autonomy of creating separate management subsystems making a part of the uniform system. As a result, at the background of various models for evaluation of separate chains, various models of objects appear that do not meet the requirements for the general model of an object. As a result, not only the principle of system unity of the subject, object and entity is violated, but the main purpose of the methodology related to the organization of work on creating the object is not fulfilled. The found out problem, therefore, is eliminated through the methodological tools used to create the system object. As such tools, the concept of forming the structure of system concepts is used. It is a structure that makes it possible not only revealing the contents of several objects, but using this concept for each of the objects to achieve the necessary compliance with the properties of the object of the meta-level system. The solution of the problem is carried out in the course of constructing algorithms related to the formation of the property of a certain meta-object, in the approach under consideration oriented towards the loyal predisposition of the organizational structure. This formation is based on the technology of constructing a hierarchy of values. In the process of its structure, fifteen-junction construction of related system concepts was obtained. The presence of the structure allows conducting a current analysis of the organization's state at any time, choosing short-term development options and implementing the medium-term scenario without violating the principles of long-term potential growth. In addition, measures are provided to describe the work of system entities in implementing specific organizational measures to make changes related to both improving the process and eliminating violations recorded during monitoring. This is achieved by combining fundamental diagnostic tools that include various functions, starting from calculating the dimensionless coordinate in a certain strategic field to multi-stage cost management as part of a specially developed complex. Thus, the company's managers receive effective tools at their disposal that allow evaluating the current state of a company, taking into account their identification at the entire distance of achieving the strategic goal.

Combining the principles of static assessment and dynamic measurement of state, a company gets an opportunity to protect itself by justifying timely changes at the level of separate chains, without violating the principles of system organization as a whole. In other words, the company's management is able to convert on the chance, demonstrating a willingness to accompany the pre-established growth potential. At the same time, the necessary compliance between the ability and readiness is achieved by tracking in dynamics the key system concept of "loyal predisposition". In fact, the description of the present concept characterizing the property of the object of the system under the research, allows not only monitoring the state of the company, but also, if necessary, restoring the lost property, developing measures to redistribute organizational powers, including updating and replacing used-up structural elements. The developed algorithms allow detecting weak links at the level of separate system chains, and in cases where the existing structure is unable to ensure the introduction of new proposals, a programme is developed to overcome specific obstacles at the level of certain executors without consequences at the post-implementation stages of a company's development.

Predisposition to loyal organisation must have some means to identify the changes that occur at the level of the developed strategy. The base of these means is comprised of the rules of maintenance of two essential sets of attributes. The first set is a multitude of factors of influence on the management system. The second set consists of a multitude of feedback symptoms. In case of absence of any means of maintaining compliance of the two sets of attributes, an organisation turns out to be unable to ensure productive selection of loyal members, without whom any program would essentially be a disloyal program. Besides, if one disregards the maintaining aspect of an organisation, a loyal program that conduces the growth of an organisation within the context of its potential at a specific time would actually inflict harm at a different time. In this regard.
The authors of this research managed to implement the idea of the loyal maintenance conceived nine years ago. Its solution was carried out by getting involved in the field of systematic problematics related to new ideas in the methodological management theory, as well as through the tools of metasystems and the knowledge gained at the level of the mesasystems.

In this regard, The problem of this study has been identified and formulated as follows: "It is impossible to trace the algorithms of loyal maintenance of an organisation in the absence of any means to equate loyal structures produced in the framework of a maintaining organisation".

The present study proposes a key question that expresses the formulation of the hypothesis. In obtaining practical results, we would like to find an answer to the following question: "What arguments support the conviction that the used structure is loyal?

The content of the proposed hypothesis is disclosed in the following formulation: "The developer of the system is always outside the system, which allows him to respond to the current circumstances and, having improved the process, to eliminate the consequences of their influence promptly. The source of improvement are symptoms of disinclination to loyalty, which are found through the developed rules".

Method

The new approach proposes assessing the loyalty of an organisational structure at any moment within its life cycle. This provides an opportunity to use objective means of selection of loyal members of an organisation and trace their appurtenance to the status of "committed", or, to be exact, "predisposed to loyalty", over time. The calculated assessment value resolves itself to fixation of a specific position coordinate identified in respect of the to the final predefined target, within the boundaries of a defined strategic field, which allows preventing the organisation from losing its operability, as well as determining the reasons behind the formation of a disloyal organisational structure.

Accumulation of knowledge about the level of predisposition to loyal members occurs by means of assuming two fundamental standpoints. The first standpoint is shaped under the influence of disloyal environment, which allows one to take a position that demonstrates the remunerativeness of loyal structures. This situation is somewhat similar to the standpoint of a sick person talking about health. The second standpoint is examined within the setting of maintenance of a loyal structure that provides substantiated representation of the results of credible (true and genuine, to be exact) loyalty that is juxtaposed with the scale of damage inflicted upon the organization in case of a loss, as well as lack of loyalty, The stated goal is oriented towards the assessment of readiness of the professional competencies of an expert capable of achieving management objectives, which are distributed for the purpose of establishing a loyal organisation within different time periods. The following main objectives are to be achieved to meet the specified goal:

- identification of the reason for ineffective application of loyalty programs;
- assessment of an expert's qualification as pertains to establishing trust-based relationships between members of an organisation;
- design of organisation development scenarios in the setting of altered goal formation;
- systematisation of the current business condition assessment and business restoration methods in the context of loyal maintenance;
- development of a loyal maintenance procedure at any life cycle thereof;
- preparation of a manual that would include violations of standards of conduct.

At the moment, business information pertaining to loyal organisation monitoring is assembled, processed and analysed. Such information contains calls and proposals that allow retaining predisposition to loyalty along the entire life cycle of an organisation. Preservation of predisposition is achieved thanks to the means of instant calculation of the strategic coordinate. Deviations from the pre-set path allow determining the reasons for the collapse of an organisation

The options for eliminating violations that have led to the loss of functioning are selected over a short time interval. Credibility of violations is determined at the level of recorded deviations identified on an annual basis considering the reallocated symptoms and interests of members of an organisation.

In the mid-term period, organisation maintenance scenarios are being implemented in the setting of reasoned motives and identified needs. These scenarios are developed and traced over a three-year time span.

In the long term, operation improvement manuals must be developed. This results in a document developed in the form of an organisation development manual. The document covers abnormal situations that take place in a perspective of three years or above, causing changes in the management process.

Aside from being the base for the development of algorithms, the listed objectives have also shaped the structure of delivery of the material from the standpoint of the subject. The subjective side of this study is shaped in reliance upon the means allowing to understand what has caused the maintaining persons to prove the necessity of changes in the system.

The process of developing the desired algorithms was carried out under the long-term testing. It took more than nine years to declare the efficiency of the investigated algorithms. Below there are three preconditions listed that have made a significant contribution to the quality of the developed algorithms.

Research of the Multi-User Loyalty

When constructing any algorithm, it is required to emphasis the object of the research, which is not only a source of uncertainty, but, in fact, a problem carrier. In our case, such a problem was multi-user loyalty.

To this effect, the object was distinguished in the course of consequential accumulation of knowledge about loyalty, the usage of which expanded in the setting of maintained understanding of the complexity of the identified object. As a result, the object revealing the essence of multi-user loyalty was described in terms of methodological grounds, which formed a base for the development of fifteen-node value hierarchy (VH).

Availability of a VH allows calculating the coordinates of a strategic position, the standing of which is evaluated in reference to the final predefined target (FDP). Evaluation of such positions is carried out using over three hundred reasonably selected attributes. Connection between neighboring coordinates allows mapping a strategic trajectory, which is laid and studied in reference to the goal orientation vector. Aside from that, if the situation so requires, deviations from the strategic course can be identified, and an activity that has temporarily lost its sustainability can be restored.

At the current stage of research, the object of our study was a certain system, the so-called "well-organised system" (WOS). One of our findings worthy of note here, determined in the course of studying WOS, is that the development of a WOS per se carries the problem here. This has resulted in the development of the initial algorithm allowing the assessment of loyal aspect of an entire process in the setting of the accompanying aspects of the complete activity. Moreover, not only did the algorithm allow to retain the unity enabling one to overcome major circumstances, but it also led to the development of a procedure to the preparation of experts, or instructors, by now, in the domain of loyal maintenance. Such procedure was designed in reliance upon a gradual study of uncertainty, revealed first around loyalty, then within the setting of loyal maintenance by means of expansion of the Reichheld effect, and, finally, from the aspect of WOS. Results of application of the developed procedure have identified a number of its faults.

Maintenance of the Well-Organised Systems

The thing is, WOS tend to function sustainably within the boundaries of a closed system, in respect of which the instances of potential malfunction of the management systems have been identified, determined and prevented in advance. Adhering to the system formation rules, one must note here that in terms of VH, the "Loyalty" class is the object, and the "Maintenance" class is the subject for the "WOS" category.

Examination of the concept of "Loyalty" at the class level indicates that uncertainty has been eliminated by means of step-wise refinement of the study. Essentially, delving into the new domains of knowledge effects the transition from a metasystem to a mesasystem. It should be noted here that a metasystem possesses the trait of a perfect system with no uncertainty in respect of the object whatsoever. This is achieved by means of gradual immersion into the technique of in-depth knowledge and obtainment of a complete one at the mesasystem level. Thus, a mesasystem implies a level of immersion that ensures clarity in respect of a previously advanced object. The principles of building a mesasystem may not be at variance with the principles of building a metasystem. Thus, the system hologram principle is implemented. The association between a metasystem and a mesasystem is described by the following formula: "Fundamental immersion into the depths takes one closer to a metasystem".

This requires a shift to a lower level system, where the "WOS" object would transform itself into a subject with the same name, "WOS". Otherwise, the occurrence of new unorthodox situations would cause the system to get out of control. Such situations occur within open systems that must be protected at the management product level. Thus, WOS becomes the object of the study, which is to be supplemented within the VH structure with a new protective function to perform the role of a subject. A so-called "well-tested mechanism" (WTM) is used in the capacity of such function.

A combination of the functions of WOS and WTM formed grounds for the improvement of the algorithm. Tests and trials of the algorithm were carried out from the position of a new VH, shaped through the use of the methodology unraveling the "Protective Immunity of a System" (PIS).

Design of the Mesasystems

The essence of PIS-specific drawbacks is that the PIS were tested based on pre-fixed sets of attributes of a specific size. It is to be noted here that the two sets we have selected are established in respect of two loyalty groups, the first of which characterizes the objective part of WOS (managers' loyalty), whereas the other one reflects the subjective part WOS (customers' loyalty). However, the listed restrictions are in no way a means to commit the potential reallocation of authorities within groups of members of an organisation. Therefore, in the course of assessing a strategic position, accustomed attitude is developed to the unchanging composition of attributes, which not only causes the "overcoming action instructor" (OAI) to develop self-complacence, but also creates dangerous implications that can cause an organisation to lose vigilance if repeated frequently. In fact, while in this position, an organisation finds itself in one of the most dangerous conditions, the so-called "chronic condition". At that, the specification and comprehension of maintenance, which still has a high level of uncertainty, is effected from the standpoint of loyalty|. In order to eliminate this drawback, one would have to build a hybrid hierarchy that would imply third-level elements to shift their places (the "Loyalty" and "Maintenance" groups are subjects). This results in the formation in a new hierarchy of the value "Predisposition to loyal members" (PLM)

So, the PLM version is the final version of VH and implements a quality systemic transition from the state of being organised to predisposition. Thus, the issue is a mesasystem where the knowledge of loyalty is shaped at functional level.

The PLM metasystem forms a base for the formulation of the topic of further study, which can be brought down to the following title: "loyal structures of maintaining organisations". Within the context of the stated topic, the subject of the study is formulated as "safeguarding the renewal". The object is allocated within the boundaries of a special methodology organised on the basis of the VH "Predisposition". Further, a conceptually new articulation is presented. It is formulated within the framework of methodological rules used on the basis of a well-tuned VH.

Thus, we needed to perform sequential fashioning of six hierarchies (loyalty, maintenance, WOS, WTM, PIS, PLM, and three transformations (loyalty – WOS – PIS – PLM) in order to obtain the final version of the VH, which provides a basis for further formulation of requirements towards a mesasystem and development of a management algorithm.

Findings

The new approach proposes assessing the loyalty of an organisational structure at any moment within its life cycle. This provides an opportunity to use objective means of selection of loyal members of an organisation and trace their appurtenance to the status of "committed", or, to be exact, "predisposed to loyalty", over time. The calculated assessment value resolves itself to fixation of a specific position coordinate identified in respect of the expert within the boundaries of a defined strategic field, which allows preventing the organisation from losing its operability, as well as determining the reasons behind the formation of a disloyal organisational structure.

Organisational Aspects

Traditional means of determining the predisposition of a member of an organisation to a loyalty class usually lead to a failure in the implementation of loyalty programs.

Proceeding from the discrepancy, it is to be assumed that the PLM of an organisation must have some means to identify the changes that occur at the level of the developed strategy. The base of these means is comprised of the rules of maintenance of two essential sets of attributes. The first set is a multitude of factors of influence on the management system. The second set consists of a multitude of feedback symptoms. In case of absence of any means of maintaining compliance of the two sets of attributes, an organisation turns out to be unable to ensure productive selection of loyal members, without whom any program would essentially be a disloyal program. Besides, if one disregards the maintaining aspect of an organisation, a loyal program that conduces the growth of an organisation within the context of its potential at a specific time would actually inflict harm at a different time. In this regard, the problem of this study has been identified and formulated as follows: "It is impossible to trace the algorithms of loyal maintenance of an organisation in the absence of any means to equate loyal structures produced in the framework of a maintaining organisation".

Knowing the problem allows one to proceed with the allocation of the object, which is the carrier of the problem. In regard to the PLM, the carriers of the problem in a specific organisation are violations of one of the two conditions – either the service of a loyal structure, or the provision of the maintaining organisation. As a result, the object of this study is the violations that lead to the loss of predisposition of an organisation to loyal members.

The best kind of recognition of a true need is to stay loyal in maintenance. The formulation of object allocation is going to be as follows: "Selection of violations that lead to the lack of loyal predisposition". Such violations are traced using a limited set of nodes with a multitude of attributes.

Elimination of uncertainty in respect of an object is performed by means of preservation of knowledge of organisational loyalty. In this manner, the first outlines of the subject of the study are shaped. The second aspect of the subject is revealed in the setting of maintaining moderateness created in respect of the opportunity to use what was identified in the course of analysis of situations, which caused a violation of the conditions of a loyal structure in the course of maintenance. This shapes the norms for finding the fastest route along the entire distance of implementation of the strategy. Progress with deviations implies losses, leading to the loss of predisposition of a loyal investor. Therefore, the assigned productivity norms must be comprehensible to investors, especially if it pertains to the share of profits. Essentially, productivity norms turn an investor who is comfortable with operating balance liabilities into an active member of an organisation.

The two aspects of the subject referred to above are studied in order to obtain a means of preventing the acquired knowledge from being filled with erroneous content of the concept of "loyalty". Such means can include well-tuned PLM algorithms that strive to preserve the genuineness of a loyal structure. Therefore, the formulation of the subject is restricted to the following: "Accumulation of knowledge of organised loyalty and preservation of moderate productivity norms in the course of eliminating the drawbacks of a system".

Setting of the goal of the study is formulated in a context that allows developing a procedure for the assessment of readiness of an OAI.

The subjective side of this study is shaped in reliance upon the means allowing to understand what has caused the maintaining persons to prove the necessity of changes in the system. Such changes must not compromise the efficiency of a system commensurable in terms of a metasystem.

As the subject of the study, an OAI must use the following formula: "Affirmation of actions that must be purposefully taken in order to eliminate a major circumstance through timely restoration of sustainable functioning resulting from the learning of the applied changes by members of the structure".

Procedure

In general, the PLM system, which is continuously accompanied and connected with debugging of management algorithms , is a device that allows to ensure the completeness of activity through methodological unity. If completeness is not provided, there is a loss of stable functioning that requires improvement of the whole process.

The proposed procedure consists of four chains, each of which is designed to solve a specific problem. Each chain, which is six steps long, is oriented towards the solution in a certain time interval.

Table 1 provides a brief description of the procedure.

Table 1. Characteristics of the procedure elements

Chain	Name	Components	Control phase
First	Assessment	Methodology	Current time
Second	Monitoring	Process	Annually
Third	Maintenance	Activity	Mid-term period
Fourth	Development	Restore	Long tern perspective

The first chain is developed to determine the coordinates of the organization, calculated at the curentmoment of time. Such determination is achieved by means of business loyalty information monitoring which is based on the algorithms of collection, analysis, detection of technological violations and organizational deviations, with the following search for solutions for their elimination and neutralization, as well as considering the development of means of their prevention and repeated exclusion.

The second chain is used to improve the integrity of the process by monitoring the symptoms of exposure to the external environment. This occurs in the conditions of choosing the optimal variant of transformation of the organization, carried out in a short period of time. On the basis of it, performance standards are established, the rules for storing business information are corrected, and the redistribution of responsibilities is carried out.

The third chain is designed to maintain the scenarios of development of the organization in the medium-term perspective. During the maintenance, the factors influencing the loss of stability are worked out and solutions to restore functioning are proposed. This is achieved through the means of the mesasystem, allowing to implement the strategy of the organization in the conditions of reasonable losses and benefits.

The fourth chain is the business card of the organization. Its importance is determined by the availability of a methodology for uncovering the potential of organizations, which is developed taking into account the long-term functioning means. The actuality of the methodology is supported by algorithms for monitoring industry motives and market needs, which makes it possible to identify large-scale circumstances, the spread of which can be traced back to all control points of the organization.

Numerical Example

The presence of the developed PlM algorithm allows making a reasoned conclusion on the current state of the enterprise and, if necessary, to ensure the restoration of its activity throughout the entire enterprise life cycle. A peculiarity of such an algorithm is that the arrangement of expertise is carried out in the course of solving the problem of loyalty predisposition. This is achieved due to the fact that it became possible to implement changes that are evaluated in relation to the final specified standard. Therefore not only the problem of ensuring the full-scale protection of the control system is solved, but also its effective actions are being coordinated.

Sceneries

This section describes the actions that were performed at the Steps No. 7-12 of the developed procedure for assessing the potential value of an enterprise.

To test the algorithm, it was necessary to evaluate 336 attributes, among which 196 are factors and 140 are symptoms.

During the assessment of the activities of the Latvian transport company, three scenarios of its development were considered:

- assessment of the current state before overcoming the crisis;
- assessment of the development plan after overcoming the crisis;
- assessment of remedial measures.

Regarding each scenario, an average weighted assessment of the company’s strategic position was performed as part of the developed procedure. It enabled to determine the significance of each of the three hundred thirty-six attributes, as well as to assess its contribution to the value of the final coordinate. As a result, three coordinates of the strategic position were calculated.

In Table 2, a comparison of three scenarios for assessing the readiness of the management team of the Latvian transport company to carry out its stable operation.

Table 2. Assessment of enterprise development scenarios

Scenario	Scenario 1	Scenario 2	Scenario 3
		Consultants	
Current assess-ment, million Euro	3,667	6,665	-
Fulfilment of potential,%	46,2	83,4	-
Conclusion	Crisis	Stable functioning	-
Proposals	General measures	No changes required	-

PLM developers

Current assessment, million Euro	5.204	*6.669*	7,558
Fulfilment of potential,%	37.9	48.5	55.0
State	Unmanageable	Unmanageable	Stable
Conclusion	Unsatisfying	Unsatisfying	Satisfying
Proposals	Identification of six key circumstances	Business support program development	PLM technology testing

It should be noted that two coordinates fell into the area of the zone of unsatisfactory functioning.
To conclude it should be noted that the developed algorithm has proven its effectiveness in solving problems of the current assessment of the state of the enterprise.

Results, Conclusions and Recommendations
This approach is based on new conceptual provisions and methodological foundations. As a result, there is an opportunity to use a limited set of knots in order to select in a variety of attributes those that by violating the conditions of emergency and synergy, leads to a loyal unwillingness. This removes the uncertainty that has existed around the object for a long time and a new goal is formulated, which is focused on the training and education of professionals willing to make changes in the system without compromising its effectiveness. An important part of the study is the disclosure of three prerequisites that led to the new formulation of the study. This is a justification for the lack of organization that exists in WOS, which leads to a dependence on quantitative assessments. The paper shows that the instructor's excessive calmness in the field of transformation of the organization by overcoming complex situations requires not only effective means of verification, but also deep immersion in the mesasystem. It is due to this that the conditions of predisposing to loyalty are created, where the disadvantages of PIS are eliminated and loyalty structures of accompanying organizations are built. For the formation of new tasks it was necessary to transform six versions of the HV, and by formulating the requirements for the mesasystem, to begin to develop a management algorithm. The toolkit for solving the set tasks is disclosed as a part of ten methodological provisions, a special place among which is given to the description of the subject and practical value. On the background of this, it is necessary to highlight four effects of the proposed approach, seven characteristics of the construction of MPL, as well as four control points that allow to establish a clear order of construction and conduct of the research and the results obtained at all stages of maintenance.

Despite the staged claims of this article, reference should be made to some of the results obtained.

Such results will be reviewed from both sides.

First, we will briefly describe the five obtained scientific results.
The management tasks on development of loyal structures, specific of construction and maintanance of their components are specified, expediency of use of concrete methods for estimation and measurement of their vari-

ous elements is grounded, the system of indicators of definition of working capacity of loyal structure of the enterprise and its components is developed.
The management task of the organization's functioning in the conditions of restoration of the lost stability is specified.

Secondly, let's consider four obtained scientific-applied results.
The procedure of a full-scale assessment of expert's readiness to accompany a loyal structure is developed.
The system of realization of the best scenario by means of synchronization of the conducted changes with the growth potential of the organization is developed..

Two points should be highlighted as perspective research areas. First, there is a need to focus on the theory of potential growth of the organization. Second, in terms of implementation, this study needs to develop a complex system to monitor the large-scale circumstances of the long-term impact with the current analysis of the organization's positions.

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INTERNATIONAL CONFERENCE ON LIFELONG EDUCATION AND LEADERSHIP FOR ALL

Assessment of Physical Fitness of Students at the Faculty of Teacher Education in Rijeka

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Abstract
Students' good physical condition is crucial for continuous health maintenance their youth, which enables them to preserve good fitness even in adulthood. This study aimed to explore the current state of students' anthropological status at the Faculty of Teacher Education in Rijeka and determine whether there is a correlation between the morphological characteristics and success in motor and functional abilities. Obesity is a grave public health concern, and a low level of motor and functional abilities can have consequences on the longevity and quality of life. The sample consisted of 134 first and second-year female students from the Faculty of Teacher Education in Rijeka. Anthropological characteristics were assessed with 15 variables (seven morphological variables: body height, body weight, body mass index – BMI, waist circumference, hip circumference, waist-to-hip ratio – WHR, waist-to-height ratio – WHtR; eight motor variables: easier and more difficult push-ups, sit-ups, plank hold, squat hold, standing on one leg with eyes open and closed; and one functional variable: stair test). Basic descriptive parameters were calculated in all variables. Pearson's correlation coefficient with a significance level of p = 0.05 was used to determine the relationship between morphological characteristics and physical fitness. The obtained results show that students achieve below-average results in the muscular endurance of the torso and lower extremities and have poor functional abilities. The results of the association between the tests of morphological characteristics and tests for the assessment of motor abilities show significant positive correlations between body weight and the balance test (UB_r_c; r = 0.50). A positive correlation was found between BMI and balance tests (UB_r_c; r = 0.54, UB_r_o; r = 0.49). Negative correlations were obtained between the balance test UB_l_o and morphological variables AR (r = -0.67) and HR (r = -0.77), and between the balance test UB_r_o and morphological variables WR (r = -0.59) and HR (r = -0.74). A moderately positive correlation was found between the morphological variable WHR and the functional test STEP 15" (r = 0.52). It is recommended that future research verifies the anthropological status on a larger student population and that the measurements are conducted on multiple occassions to monitor students' status and thus control the impacts of the implemented program.

Key words: Teacher education, physical fitness, students, anthropological characteristics, correlations

Introduction
The World Health Organization (WHO) describes physical activity through all movements, i.e., movements in daily life, including work, transportation, household chores, recreation, and sports activities. It categorizes it according to the level of intensity from low and moderate to high. A very high prevalence rate of insufficient physical activity has been particularly observed in children and adolescents, which has resulted in the need to consider the necessary changes in physical activity (Jurakić and Haimer, 2012). In the Republic of Croatia, similar findings have been obtained, with almost 60% of the population not participating in physical exercise (Jurakić and Haimer, 2012). In a study conducted on a sample of students in Zagreb, Pedišić et al. (2014)

concluded that insufficient physical activity is prevalent among students. More specifically, female students are most physically active during household chores, while male students show the highest physical activity in their free time. Vrkić (2018) states that the World Health Organization has ranked the lack of physical activity among the main risk factors for mortality in the world, specifically, in the high fourth place. Following such alarming data, the design and implementation of strategies for improving physical activity are being developed, which will be carried out in the form of campaigns and actions organized by various institutions (Jurakić, 2015). When observing the problem in kinesiology, all of the above points to a low level of fitness that is closely related to physical abilities, physical appearance, and mental strength of the individual (Bašić, 2017). This condition's causes are numerous, but it is necessary to emphasize the sedentary lifestyle, poor diet, and an insufficient level of physical exercise. Therefore, transformation processes should be directed towards improving those abilities impaired by the sedentary lifestyle. This primarily refers to strengthening the torso and pelvis muscles responsible for optimal posture (Mašina, 2019).

Furthermore, the availability of additional sports facilities for children and youth and activities offered to those who wish to engage in recreation is a luxury because such activities mostly require financial compensation. It has been observed that parents' level of education and finances influence children's greater or lesser engagement in physical activity already during preschool age (Trajkovski, 2011). Therefore, the beginning of changes in the approach should go back to the earliest age of the child to develop healthy habits for a quality life in adulthood, which is also the role of Physical Education (PE). The most dynamic period in the growth and development of young people occurs during the transition from high school to university (Mašina, 2019). This period is considered to be extremely sensitive as young people often resort to various types of risky behaviors such as smoking, alcohol consumption, unprotected sex, and poor eating habits (Wang et al., 2009), receive insufficient rest, and show reduced levels of physical activity (Altun, 2008; Duraković, 2016). Research dealing with fitness in the student population mainly identifies specific deficits in some physical abilities (Mitchell et al. 2008; Mraković, Horvat and Brčić, 2006; Tomljenović, Tomljenović, and Radošević 2007). Therefore, students should be encouraged to take responsibility for their own health and social relationships (Mašina, 2019). Those students with more appropriate eating habits, responsibility towards health, and more significant physical activity better adapt to new situations and transmit positive habits in their environment (Altun, 2008). Modern society strives for an active lifestyle; therefore, it is also important to understand how physical activities can positively impact motor and psychological development, self-satisfaction, and one's own life (Glibo and Barić, 2017). Physical Education, as a compulsory course at the Faculty of Teacher Education in Rijeka, should be accessible and stimulating and meet the modern needs of students at all universities to ensure a better working environment and thus provide conditions for life longevity. In accordance with previous research, three hypotheses were set. It will be determined that the participants belong to the group at risk of obesity and cardiovascular diseases. Furthermore, it is hypothesized that they show below-average results in some motor and functional abilities and significant correlations between some morphological characteristics and physical abilities. This study aimed to explore the current state of students' anthropological status at the Faculty of Teacher Education in Rijeka and to determine whether there is a connection between the morphological characteristics and success in motor and functional abilities.

Methods

The sample of participants consisted of 134 female students enrolled in the first and second year of the Integrated Undergraduate and Graduate Study of Teacher Education and the Undergraduate University Study of Early and Preschool Education. All students attended PE classes, which is a compulsory course in the first two years of study.

The sample of variables consisted of seven morphological variables (body height, body weight, body mass index – BMI, waist circumference, hip circumference, waist-to-hip ratio – WHR, waist-to-height ratio – WHtR) (according to Mišigoj-Duraković, 1998) and eight motor-functional variables, which explored the muscular endurance of the abdominal muscles, repetitive arm strength, chest and shoulder blades, muscular endurance of the torso, muscular endurance of the legs, unilateral balance, and general level of endurance.

Table 1. Sample of anthropometric variables and tests to assess the physical abilities of female students

Test	Abbreviation	Structure of morphological characteristics
Body weight (kg)	BW	Body volume and mass
Body height (cm)	BH	Longitudinal skeletal dimensionality
BMI (kg/m²)	BMI	Assessment of the nutritional status
Waist circumference (cm)	WR	Body volume and mass
Hip circumference (cm)	HR	Body volume and mass
Obesity type risk index	WHR	Risk assessment for obesity
Cardiovascular disease risk index	WHtR	Risk assessment
TEST	ABBREVIATION	STRUCTURE OF PHYSICAL ABILITIES
Push-ups_difficult	PU_d	Repetitive strength of the chest, arms, and shoulders
Push-ups_easy	PU_e	Repetitive strength of the chest, arms, and shoulders
Sit-ups in 60"	SU_60“	Repetitive strength of abdominal muscles
Squat hold	SQH	Muscular endurance of the lower extremities
Plank hold	PLANK	Muscular endurance of the torso
Standing on one leg with eyes open (3") and closed (15")	MUB_r/l_o/c	Unilateral balance
Step test	STEP	Assessments of heart, lung, and muscle performance

Description of the measurement procedure

We assessed physical abilities integrated into an individual’s daily life. The measurement protocol for assessing motor and functional abilities began with a brief verbal description of the tests and their role and a demonstration with provided notes on the most common errors. After that, a dynamic warm-up activity was performed to increase the range of motion, achieve better muscle blood flow, and increase muscle tone, with particular emphasis on those body parts that are more actively engaged in the testing process. The body was processed topologically, from the head to the lower body parts; this lasted between 7 and 10 minutes. The norms with which female students would be compared were adjusted to the general population. Muscle endurance of the abdominal muscles was assessed with the “sit-ups in 60"” test (Bašić, 2017), repetitive strength of the arms, chest, and shoulder blades with the “push-ups” test (Bašić, 2017), muscular endurance of the torso with the “plank” test (Mayer, 2012), muscular endurance of the legs with the “squat” test (Jukić, 2008), and the unilateral balance with the “standing on one leg with eyes closed for 30 seconds” (Marković, 2014) and the “standing on one leg with eyes closed for 15 seconds” test (Marković, 2014), while the general level of fitness was assessed with the “step” test (Narang et al. 2003).

Push-ups_t/l – legs are outstretched and placed together at all times. The torso is tight and flat, and the hips must not “drop.” Breaks are made for no longer than 1-2 seconds while in the upper position. The result comprises the largest number of correct attempts.

Sit-ups in 60'' – the participant lies on his back with his legs fully extended and attached to stable support or held by a partner; the arms are folded at the nape of the neck. The exercise begins by lifting the torso into a seating position; the torso then moves into a forward bend, and the elbows touch the knees. The number of repetitions achieved in 60 seconds is recorded.

Squat hold – it is performed while the person maintains a static position without disturbing the performance technique. The body’s distance from the wall is the length of the thigh, and the feet are positioned at the width of the hips. The load, i.e., the center of gravity height, is determined based on the angle between the lower and upper leg, which is 90°. The result achieved in seconds is recorded.

Standing on one leg with eyes open and closed – at the measurer’s sign, the participant lifts one leg off the ground, with his hands placed on the hips. Contacts with the ground are counted in 30 seconds and 15 seconds, respectively.

Plank – at the start sign, the participant lifts the pelvis off the ground and tries to maintain the position of a “plank” for as long as possible, whereby the head, torso, and legs are placed in a straight line. The time expressed in seconds is recorded.

Stair test – the lowest step or any fixed ground approximately 20 cm high is chosen. The participant stands on it with one leg, raises the other leg on that step, then steps down onto the floor again. He repeats this climbing and descending action 24 times per minute for 3 minutes. A break is made after 3 minutes, which lasts for exactly 1 minute. Then, the heart rate checked by counting the heartbeats for 15 seconds.

Methods of data processing

Basic descriptive parameters (arithmetic mean and standard deviation, minimum and maximum score, and range) were calculated in all variables. Pearson's correlation coefficient with a significance level of p = 0.05 was used to determine the relationship between morphological characteristics and physical fitness.

Findings

Descriptive parameters describing basic morphological characteristics were processed. The number of participants per unit of measurement is variable because it depends on the participants' presence at the measurement procedure (Table 2). The average body height is 167.56 cm, and body weight 64.76 kg. The measure obtained by the ratio between body weight (kg) and body height (m^2) is the body mass index (BMI), and the average value is 22.99. The variable waist-to-hip ratio (WHR = 0.82) was obtained from the ratio of waist circumference (79.38) and hip circumference (96.54) as well as from the waist-to-height ratio (WHtR = 0.47).

Table 2. Basic descriptive parameters of morphological characteristics

Tests	N	Mean	SD	Min	Max	Ran
Body height	121	167.56	5.53	153.00	180.00	27.00
Body weight	121	64.76	12.23	45.50	113.00	67.50
Body mass index	119	22.99	3.92	16.92	38.20	21.28
Waist circumference	113	79.38	11.99	35.00	125.00	90.00
Hip circumference	113	96.54	12.23	41.00	128.00	87.00
WHR	113	0.82	0.08	0.64	1.20	0.56
WHtR	109	0.47	0.07	0.20	0.72	0.52

N – number of participants, Mean – mean value (arithmetic mean), SD – standard deviation, Min – minimum result, Max – maximum result, Ran – range, WHR – Waist-to-hip ratio, WHtR – Waist-to-height ratio

Descriptive indicators of motor and functional abilities for female students are presented in Table 3, which shows that the arithmetic mean in the test for the assessment of repetitive strength of the chest, arms, and shoulders, "*push-ups_easy*," is 10.35 repetitions and 18.17 repetitions for "*push-ups_difficult*." In the test that assesses the abdominal muscles' repetitive strength, "*sit-ups in 60*," the mean value is 31.89 repetitions in 60 seconds. The test for assessing the whole body's muscular endurance, *"plank hold," revealed that* the participants could last an average of 65.76 seconds with a very large range between the minimum and maximum result (12.00-125.00). In the test that explores the lower extremities' muscular endurance, "*squat hold*," the students achieved an average score of 64.05 seconds. In the test for checking the unilateral balance "*standing on the right and left leg with eyes open for 30 seconds*," the number of contacts with the ground is, on average, lower than 1. In the test "*standing on the right and left leg with eyes closed for 15 seconds*," the result on the right leg is 0.85 and 1.07 on the left leg. The heart rate in the "*step*" test reached the arithmetic mean of 28.84 in 15 seconds or 115.37 per minute. A low value of the standard deviation is observed in all balance assessment.

Table 3. Basic descriptive parameters of motor and functional abilities

Tests	N	Mean	SD	Min	Max	Ran
push-ups_difficult (rep.)	17	10.35	4.87	5.00	21.00	16.00
push-ups_easy (rep.)	84	18.17	13.15	3.00	50.00	47.00
sit-ups in 60" (rep.)	120	31.89	10.17	9.00	51.00	42.00
plank hold (sec.)	122	65.76	25.38	12.00	125.00	113.00
squat hold (sec.)	116	64.05	29.04	15.00	145.00	130.00
standing on the right leg with for 30 sec with eyes open (n.cont)	118	0.25	1.43	0.00	6.00	6.00
standing on the left leg with for 30 sec with eyes open (n.cont)	118	0.25	0.73	0.00	3.00	3.00
standing on the right leg with for 15 sec with eyes open (n.cont)	118	0.85	1.33	0.00	4.00	4.00
standing on the left leg with for 15 sec with eyes open (n.cont)	118	1.07	1.05	0.00	3.00	3.00
steps (HF in 15 sec)	82	28.84	5.80	18.00	40.00	22.00
steps (HF in 1 min)	82	115.37	23.18	72.00	160.00	88.00

Mean-mean value (arithmetic mean), SD- standard deviation, Min-minimum result, Max-maximum result, rep. – repetitions, sec. – seconds, n. cont. – number of contacts, HF – heart frequency

Table 4 shows the matrix of correlations of variables. The results of the correlations between the tests of morphological characteristics and the tests for the assessment of motor abilities show significant positive correlations between body weight and the test for the assessment of balance (UB_r_c; r = 0.50). In particular, overweight individuals are expected to have more contact with the ground. Also, a positive correlation was observed between BMI and balance tests (UB_r_c; r = 0.54, UB_r_o; r = 0.49), which means that individuals with a higher BMI are expected to make more contact with the ground. Very strong negative correlations were observed between the balance test UB_1_o and the morphological variables AR (r = -0.67) and HR (r = -0.77), while a negative correlation was found between the balance test UB_r_o and the morphological variables AR (r = -0.59) and HR (r = -0.74). A moderately positive correlation was found between the morphological variable WHR and the functional test STEP 15" (r = 0.52), which means that a higher heart rate is expected in people with a higher WHR value in the STEP 15" test. Interestingly, significant negative correlations were observed between WHtR and balance, UB_r_o (r = -0.58) and UB_l_o (r = -0.64), which means that individuals with a higher WHtR index are expected to make less contact with the ground in the test that assessed the unilateral static balance with eyes open.

Table 4. Variable correlation matrix

	BH	BW	BMI	WR	HR	WHR	WHtR	PU_d	PU_e	SU_60“	Plank	SQ	UB_r_o	UB_l_o	UB_r_c	UB_l_c	STEP 15"
BH	1.00																
BW	-0.15	1.00															
BMI	-0.12	0.98	1.00														
WC	0.08	0.20	0.17	1.00													
HC	0.04	0.09	0.04	0.92	1.00												
WHR	0.08	0.31	0.35	0.63	0.29	1,00											
WHtR	0.13	0.18	0.17	0.99	0.91	0.63	1,00										
P_t	0.07	0.19	0.23	-0.20	-0.30	0.08	-0.21	1.00									
P_l	0.11	-0.02	-0.03	0.33	0.39	0.05	0.35	0.04	1.00								
SU_60“	-0.32	0.27	0.27	0.28	0.37	-0.03	0.23	0.08	0.51	1.00							
Plank	-0.13	-0.07	-0.03	0.01	0.02	0.02	-0.05	0.29	0.20	0.58	1.00						
SQH	-0.06	-0.13	-0.21	0.01	0.12	-0.19	0.00	0.23	0.20	0.50	0.54	1.00					
UB_r_o	-0.06	0.47	0.49	-0.59	-0.74	0.03	-0.58	0.49	-0.16	-0.27	-0.14	-0.29	1.00				
UB_l_o	0.09	0.08	0.07	-0.67	-0.77	-0.13	-0.64	0.42	-0.16	-0.45	-0.20	-0.13	0.84	1.00			
UB_r_c	0.18	0.50	0.54	-0.26	-0.43	0.23	-0.19	0.35	-0.08	-0.36	-0.30	-0.21	0.70	0.50	1.00		
UB_l_c	0.36	0.04	0.12	-0.34	-0.47	0.07	-0.31	0.43	0.11	-0.17	0.23	-0.18	0.44	0.42	0.47	1.00	
STEP 15"	0.41	-0.06	0.04	0.24	0.04	0.52	0.27	-0.01	-0.09	-0.08	-0.16	-0.23	-0.07	-0.18	0.12	0.10	1.00

BH – body height, BW – body weight, BMI – body mass index, WC – weist circumference, HC – hip circumference, WHR – waist-to-hip ratio, WHtR – waist-to-height ratio, PU_d – push-ups difficult, PU_e – push-ups easy, SU_60" – sit-ups in 60", Plank – plank hold, SQH – squat hold, UB_r_o – standing on the right leg with eyes open, UB_l_o – standing on the left leg with eyes open, UB_r_c – standing on the right leg with eyes, closed UB_l_c – standing on the left leg with eyes closed, STEP 15" – steps test

Results, Conclusions and Recommendations

Body height indicators range from 153.00 cm to 183.00 cm, with an average value of 167.56 cm. The obtained results indicate that the first- and second-year students from the Faculty of Teacher Education (University of Rijeka) are shorter and have, on average, greater body weight (64.76 kg) and higher BMI (22.99) than the students from the Faculty of Law and Faculty of Economics (University of Split) (Mladineo Brničević, Duplančić, and Marinovć, 2011). The established value in the BMI variable for female students is 22.99 kg/m², and, according to the WHO classification, they belong to the category of normal nutrition (18.5-24.9 kg/m²) without being at risk of cardiovascular and chronic disease. The result in the waist circumference (79.38 cm) indicates the upper-risk limit (80 cm>) for obesity in the abdominal area. An additional measure of the WHR index was calculated to assess the adipose tissue distribution. WHR determines the type of obesity, i.e., classifies the participants into two groups: centrally and generally obese. Given that central obesity is associated with a higher risk of cardiovascular disease, this index indicates a high-risk population. People with an obesity type index greater than 0.75 are considered centrally obese. The result of female students is 0.82, which places them in the at-risk group of cardiovascular diseases. Waist-to-height ratio (WHtR) is another measurement used to assess the health risk of obesity (Ashwell & Hsieh, 2005). The value >0.5 indicates an increased risk, while >0.6 indicates a significantly increased risk of obesity (Ashwell & Hsieh, 2005). The result achieved by the female students is 0.47, which does not place them in the group characterized by an increased risk of obesity. From the above-mentioned, it can be concluded that female students show results within the reference values in BMI, waist circumference, and WHtR variables, indicating that they do not belong to the at-risk group for obesity. However, the higher score in the WHR variable (0.82) does place them in the at-risk category of cardiovascular disease. It is vital to conclude that when taking measures, and, in accordance with the research objective, one should not rely only on one measure as a relevant indicator of the possible risk of potential diseases. Research confirms that significant increases in waist circumference, hip circumference, and WHR were observed in the first-year student population (Deforche et al., 2015; Watts et al., 2009).

Motor and functional abilities are a good indicator of an individuals' level of fitness. Most people, however, are subjective in assessing their own and other people's abilities because they are often associated with physical appearance. However, good physical appearance does not necessarily signify good shape. Most people have average physical abilities. This is confirmed by the results achieved by female students in the“*push-ups_easy*” (18.17) and “*sit-ups in 60''*” (31.89) tests. These results were compared to the norms of “Basic Training for Life” (Bašić, 2017). The study by Cahse et al. (2014) deals with the determination of fitness norms for the “plank” exercise in the population of young people aged 18-25 years. The obtained results suggest that 118 seconds in this task is considered average. In comparison, the achieved average results of female students from the Faculty of Teacher Education are 65.76 seconds, which is significantly lower than anticipated. The functionality of human movement depends on the stability of the spine, pelvis, and shoulder blades ("the core"). According to all the above-mentioned, it can be suggested that the torso's poor muscular endurance may result in a sedentary lifestyle and insufficient physical exercise, and may consequently impair posture and functionality in the movements used in everyday life. In the “squat hold test,” the students achieved a result of 64.06 seconds, which is slightly lower compared to the fitness standard of 90 seconds. Insufficient physical activity and an increased fat component are associated with decreased muscle endurance (Mayer et al. 2012). According to Marković (2014), the framework norm for assessing balance for the general population is standing still on one leg with eyes open for 30 seconds and eyes closed for 15 seconds (without contact with the ground). Female students generally meet the recommended normative values; however, in the “standing on one leg with eyes closed for 15 seconds” test, an average of 1 contact with the ground is observed. This indicates possible physical imbalances that can have consequences in functional walking and running. In this study, in the test assessing the aerobic endurance in a particular activity, female students achieved a score of 28.84 heartbeats in 15 seconds, or 115.13 beats per minute, which, according to the fitness standard, is below the average score of functional abilities. The results of the research conducted by Mraković, Horvat, and Brčić (2006) also indicated a low level of functional abilities and an increase in the percentage of subcutaneous tissue in students. In their longitudinal study, Mitchell et al. (2008) analyzed medical students' physical fitness, concluding that, over three years, not a single parameter decreased except for aerobic endurance indicators, which they attributed to the older chronological age of the participants. In younger adolescents, aerobic endurance decreases by 0.1-0.3% per year. In a study by Tomljenović, Tomljenović, and Radošević (2007), which was carried out on a sample of female students at the Faculty of Teacher Education in Gospić, the authors found an increase in the value of skin folds, forearm circumference, and speed of movement, as well as a decrease in aerobic capacity. In all variables for assessing physical abilities, vast ranges can be observed in the result, which indicates significant differences between those who engage in sports, exercise recreationally, or do not exercise at all. According to the results of morphological characteristics and some physical abilities, it can be concluded that female students do not move enough. Furthermore, in addition to PE classes, it is necessary to have additional programs (courses) that would encourage female students to exercise. Given that a particular deficit was observed in the functional abilities and muscular endurance of the torso, the programs should be focused on activities that develop precisely the endurance and those muscles responsible for the torso's stability. Today, running schools are very popular, most often applying an interval or continuous form of training. Activities such as hiking, biking, swimming, dancing, or some other popular form of fitness training can also be included. Sedlacek, Pistlova, and Antala (2011) stated in their study that better results in motor skills are achieved by students of both sexes who have PE as an elective subject compared to those for whom it is a compulsory program. Similar results were found among students of both sexes who participate in additional exercise programs in their free time.

The correlation results between the tests of morphological characteristics and tests for the assessment of motor abilities show significant positive correlations between body weight and BMI and tests of balance assessment (BW; UB_r_c; r = 0.50, BMI; UB_r_c; r = 0.54, UB_r_o; r = 0.49). Apparently, body weight and BMI upset the balance because people with higher body weight and higher BMI values make contact with the ground more often during the test performance. Dorneles, Pranke, and Mota (2013) concluded in their study that certain anthropometric characteristics, such as body height, the center of gravity height, or body weight, may impact imbalance. Very strong negative correlations were obtained between the balance test UB_10 and the morphological variables WC (r = -0.67) and HC (r = -0.77), as well as between WHtR and balance, UB_r_o (r = -0.58) and UB_l_o (r = -0.64). This means that people with a higher WHtR index are expected to make less contact with the ground in the test assessing unilateral static balance with eyes open. In a study by Rivas and Andries (2007) and Lemos et al. (2009), it was found that the distribution of body weight in women leads to a lower center of gravity compared to men of the same height and thus to reduced values of postural oscillations. The above-mentioned suggests that body weight distribution may significantly impact oscillations in tests of balance assessment. A positive correlation was found between the morphological variable WHR and the functional test STEP 15" (r = 0.52). Thus, people with higher WHR values also show a higher heart rate in the STEP 15" test. This may be explained through the physiological system of action whereby people with higher WHR values have a higher percentage of adipose tissue in the abdomen and hips, which, in turn, creates an additional burden on the cardiovascular and respiratory system. In this case, the increased oxygen demand is offset by a higher heart rate. In his research, Mašina (2015) concluded that increased body volume, due to a higher proportion of fat component, significantly affects the reduction of muscle endurance indicators. In an interesting study by Morinake et al. (2012), a negative correlation was observed between the body fat percentage and the daily number of steps in Japanese and Thai students, which in a way confirms the result and conclusion regarding the negative association of higher heart rate and WHR values. A study by Peterson, Degenhardt, and Smith (2003), which was carried out to determine the health status and fitness levels of medical students and their correlations, found that exercise habits (especially exercise frequency and intensity) lead to positive relationships with lower heart rates, lower body fat rates, higher VO2max estimates, and better results in strength and flexibility.

First- and second-year students of the Integrated Undergraduate and Graduate Study of Teacher Education and Undergraduate University Study of Early and Preschool Education, who attend compulsory PE classes, achieve results in morphological variables that do not place them in the at-risk group of obesity; however, in WHR values, they do belong to the at-risk group of cardiovascular diseases. Furthermore, female students score below average results in tests of muscular endurance of the torso and lower extremities. In the test that explores the unilateral balance on the left leg with eyes closed, there was slightly more frequent contact with the ground compared to other balance tests, which may indicate certain bodily imbalances. Also, in the only variable that assessed functional abilities, female students achieved below-average results. Insufficient daily physical activity combined with a sedentary lifestyle can lead to poor muscle endurance and reduced aerobic capacity. Significant positive and negative correlations were found between some morphological variables and balance assessment tests, whereby body weights and BMI were significantly positively correlated. On the other hand, WR, HR, and WHtR were negatively correlated with balance tests. The expected result was determined between the WHR variable and the step test, which indicates that people with higher WHR values are expected to have a higher heart rate in the STEP 15" test.

In conclusion, based on the results of this research thus far, female students would benefit from an elective course with additional physical content because the intensity and extensiveness of the sedentary lifestyle are much greater than the number of PE classes that can sufficiently activate muscle groups for effective functioning in everyday life. University education, due to its role, is an excellent platform to promote a healthy lifestyle. The recommendation for future research is that the anthropological status is explored on a larger sample of students. In addition, the measurements should be conducted on multiple occasions so that the students' status and the effects of the implemented program can be monitored.

Plagiarism Rate= 14%

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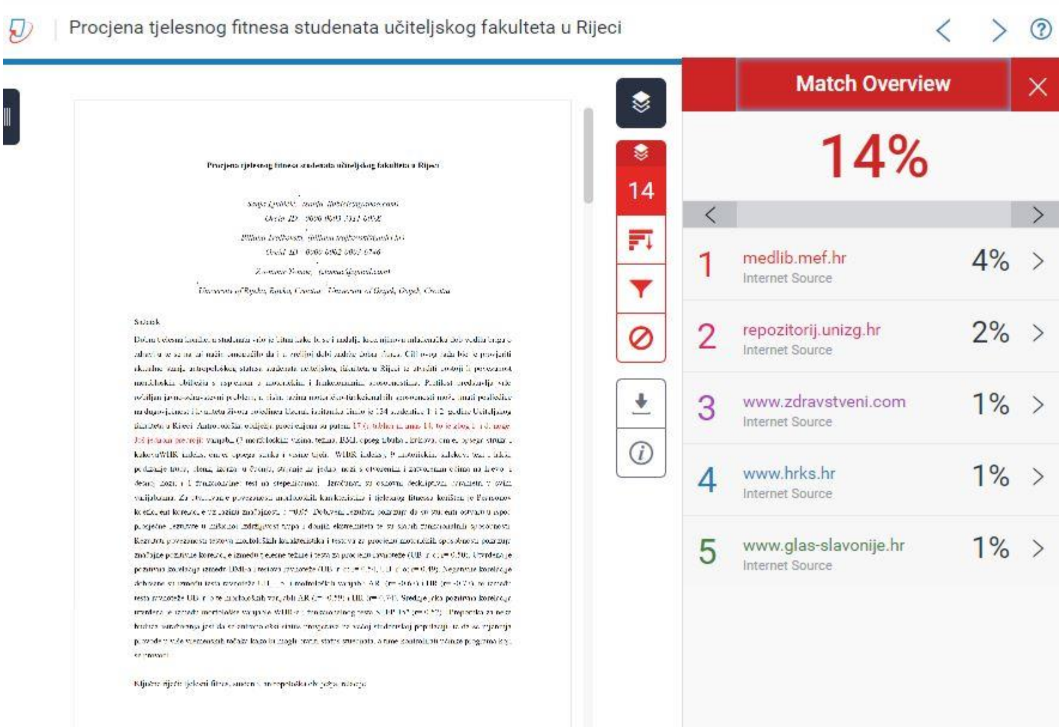
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Towards competency-based learning in sustainable music education

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Abstract
Latvian education system is in the process of the paradigm shift towards competency-based learning to ensure the improvement of the quality of education. It is in line with the Sustainable Development Goal 4, which foresees to ensure quality education of inclusive and equitable character and enhance lifelong learning opportunities for all (UNESCO, 2016). This requires a change of attitudes and ways of thinking also in the field of music education. The research aims to study the possibilities of integration of drama elements in the music curriculum of primary school to strengthen students' sustainability engagement in music education. A qualitative study was conducted using observation and an interview as research methods and content analysis was applied to analyse and interpret the data. The outcomes of the research raise considerations of strategies for strengthening cross-curricular links and ensuring effective cooperative partnership among teachers and providing regular feedback and critical self-reflection.
Keywords: integration, drama elements, music lessons, primary school, sustainability

Introduction
Today, the world is characterized by globalization, the development of information technology and the diversity of values, as a result of which human activities in a wide variety of fields are becoming more widespread and unpredictable. We all want to live in a developed society in the future and, therefore, there is a need to provide a high-quality education and enhance the competence development of today's children prepare them for life in a constantly changing world in the future (Skola2030, 2017).

It is in accordance with the Sustainable Development Goal 4 that envisages to ensure quality, inclusive and equitable education and improve lifelong learning opportunities for all (UNESCO, 2016). This context acknowledges the need to reform and transform educational policy and practice, to meet the advanced expectations of sustainable education and its values in a nowadays challenging world. Sustainable education can be distinguished by four dimensions that address educational policy and practice - sustainability, tenability, health and durability, whose successful implementation demands the acquisition of sustainability competences and development of unconventional ideas and transformative pedagogical strategies and approaches (Sterling, 2001; Sterling et al., 2017).

In a modern educational space, Latvian education system faces the paradigm shift following the strategic goals of Latvian education policy. It is aimed at changing the course towards competency-based education by implementing the content reform of general education, thus promoting the sustainability aspects and competitiveness of education in the local and global context. These ideas have special relevance for the scientific discourse on the interrelationship between sustainability and music education. According to Østergaard (2019), there are two dominating trends – one regarding music as a means for sustainability education and other - believing in a need in sustainability music education. The first trend applies music as a tool to reach sustainability goals, thus losing the aesthetic and creative potential of music. However, performing, creating, and listening to music fit perfectly in the structure of the sustainability competencies which are characterized by future orientation, critical and creative thinking, action competence and an ability to accept and cope with change (Sterling et al., 2017; Østergaard, 2019).

The context requires a change of attitudes and ways of thinking and acting also in the field of music education by offering active participation, creative exploration and self-expression that hold the potential of creating openness toward the environment. Unfortunately, Latvian pupils are generally good at tasks that require remembering or acting in familiar situations but lack the skills and experience to process a variety of data, work in a team, offer solutions to non-standard situations, make connections between theoretical and real-life experiences, analyse achievements, set goals for the future, as well as implement their ideas in new conditions (Skola2030, 2017). Therefore, sustainable music education, where creative self-expression through drama becomes an important tool for achieving music learning goals, can ensure opportunities to promote open-mindedness and experience ways as an artist thinks. Drama methods are based on spontaneity - energy that drives a person to an adequate reaction in unprecedented situations and increases a person's ability to react to new situations. As Østergaard (2019) emphasizes, promoting openness is one of the most significant contributions of the arts to sustainability education.

Development of educational programs in the 21st century is based on theories that recognize students' holistic development and use the concepts of "experience and capacity development", "competency-approach", "upbringing", "ability to live in today's multicultural society", "competitiveness" as the basic categories (Andersone, Kalniņa, 2018). One of the areas in the new curricula is Cultural Awareness and Self-Expression in the Arts, the aim of which is essential for the development of each person's self-expression. Pupils develop an understanding of culture - they get to know and understand themselves, their belonging to national, state, community culture, as well as are aware of cultural heritage, cultural diversity and expressions, understand the ideas of different types of art - visual arts, music, literature, drama - and their means of expression (Kultūras izpratne un pašizpausme mākslā, 2019).

Drama is a new subject that is offered in the improved standard of basic education and serves the development of a comprehensive personality. By using acting skills and drama methodological techniques, students can get to know themselves better and to develop communication skills, empathy, creativity and confidence. They also acquire a stage performance and public speaking experience. In drama classes, work is also done with a text that improves the language and enables the pupil to better understand the meaning of literature, various social phenomena and events of the respective era (Leitāne, 2018). The elements of drama are practiced by its specific tools - role-playing, direct communication, improvisation, purposeful speech, control of body movements, which help to develop personality, attention, empathy and cooperation skills and form an informed theatre audience. (Avotiņa et al., 2018). As a subject, drama is designed to be taught by current teachers of literature, social sciences or other subjects, both as a separate subject and in an integrated way, complementing traditional forms of creative self-expression such as music, literature, social sciences, sport and health (Valdībā pieņemts valsts pamatizglītības standarts, 2018). Drama pedagogy develops along with the nowadays methodologies are already known with specific names: theatre sports, theatre games - improvisations, creative drama, etc. (Katane, Kļava, 2018). Vorošilova (2018) emphasizes that the skills acquired in drama classes are important for everyone, so it should not be associated only with opportunities to become an actor.

The theoretical context reveals the current trends towards sustainability in music education, its interdisciplinarity and the findings have demonstrated the significance of mutual interconnectivity of the issues mentioned above and a need to study the problem in depth.

The purpose of the research is to study the possibilities of integration of drama elements in the music curriculum of primary school to strengthen students' sustainability engagement in music education.

The research questions are: (1) What criteria should be included in the methodological material development for the integration of drama elements in the music curriculum of primary school? and (2) How to integrate drama elements in music lessons in primary school?

Method

Method of the research

A qualitative research methodology, based on the social constructivist paradigm and hermeneutic interpretive phenomenology approach, is used to address the topic. It clarifies the conditions leading to the understanding of lived experiences of people in conformance with legal and ethical requirements. The qualitative data collection techniques will be used: 1) interview and 2) detached observation. Content analysis as the method of data analysis by using an interpretive and critical approach will be applied.

The chosen interpretive research methodology will allow experiencing the process of building relationships and collaboration between the participants. The research applies a qualitative research method - an interview to find out the experience and opinions of drama, music and pedagogy experts. The data from the interviews help to understand the essence of drama as a teaching method, to find out the possibilities of integration of drama elements in the music curriculum of primary school, as well as to develop criteria for observing lessons that integrate drama elements into the primary school curriculum.

A qualitative research method - detached observation is used to capture specific techniques for the integration of drama method in lessons. The method made it possible to observe the use of drama elements in practice, as well as to record specific teaching methods that reveal the patterns of creative approaches that can be used in in the music curriculum of primary school. Good practice examples will be derived from the analysis of observations and interviews, thus giving immediacy and authenticity to the voices of participants, as well as encouraging practitioners to reflect on their experience and develop their teaching strategies and implement them into educational practices.

Population-sampling

The respondents (experts and teachers practitioners) were selected by purposeful random sampling strategy. The qualitative research sample consists of 9 participants – 4 teachers practitioners from general education institutions and 5 experts. In total, four general education institutions were involved in the study - two schools from Kurzeme and two from Vidzeme region in Latvia. Observations were made at schools where one of the teachers was ready to demonstrate a lesson in which elements of drama were integrated. The lessons were taught by teachers with pedagogical experience between 19 and 33 years. Teachers' specializations are different - primary school, rhythmic, health studies, social studies, drama teacher. The age of pupils and the grades (from 1st to 12th grade) are also different. The respondents have learned about drama as a pedagogical method in several ways – non-formal education courses, amateur theatre, in-service teacher training, theoretical literature and practical examples, and ideas from internet resources. All educators acknowledge that new techniques are most often sought and adapted by themselves. Then, by approbating the specific technique in the lesson, the usefulness and effectiveness of the method are evaluated.

The experts were selected for interviews according to the following criteria: work experience, connection with drama and pedagogy and recognition in the cultural life of the local community. Respondents have pedagogical experience ranging from 23 to 47 years. All interviewees have expanded their knowledge by attending various continuous professional development courses and are active participants in the field of culture, both as directors, event managers, vocal educators, and leaders or members of amateur art groups. The interviews were provided by the following experts:

- A primary school teacher with 23 years of work experience, who works as an actress in an amateur theatre, leads a student theatre group, creates scenarios for various events.
- Theatre director, who has been working in the field of pedagogy for 38 years, teaching the basics of culturology, ethics and film art, and is a practising amateur theatre manager.

– Teacher of sports and creative drama - teacher of non-formal education in drama and theatre sports groups, director of the amateur theatre. Pedagogical experience - 38 years.
– A music teacher in general education and choir conductor with 43 years of pedagogical work experience, for the last 10 years has been a vocal teacher in solo singing classes.
– A music teacher in a general education with 47 years of pedagogical experience. She is a director of a popular music studio, vocal teacher, manager, movement consultant, costume designer, etc. Also currently running a studio working with children and young people from 3 years of age.

Findings based on interviews
Within the framework of the research, five structured interviews were conducted. The data were obtained from teachers, whose professional activity is directly or indirectly related to the use of drama and its elements. The interview questions were designed to find out teachers' opinions on the possibilities of integrating drama elements into the learning process and good practice examples, as well as teachers' readiness to introduce these innovations in their lessons. Consequently, the questions outlined the foreseeable difficulties, availability of methodological materials and professional development activities, as well as the criteria which should be included in the methodological material development for the integration of drama elements in the music curriculum of primary school.

All respondents acknowledge that changes in education are necessary in both content and approach. However, respondents also point to the expected difficulties: *"....often teachers lack resources to provide requirements of a competency approach. The education system must change, but we must not rush it and lose the good things we already have"*. Respondents admit that *"the root of the problem lies in the fact that many educators lack the skills and knowledge to create the learning process creatively. There is a lack of understanding of how to look at the subject, the skills and knowledge required in it from different angles"*. Attention is drawn to the fact that any changes must be systematically and purposefully explained to both teachers and parents. Pupils are more flexible and can accept new things faster, especially when it comes to activities and participation. The study points to the contributing and hindering factors in this process (see Table 1).

Table 1. Contributing and hindering factors for the integration of drama elements

Contributing factors	Hindering factors
Development of communication and presentation skills	Pupils' shyness, insecurity, passivity and fear of public speaking, ridicule in the classroom
Development of verbal and non-verbal communication skills	Teachers lack creativity and the ability to accept change, hampered by internal resistance
Deeper understanding of literature and development of speech skills	Lack of quality good practice examples
Acquisition of skills through action	Preparing and using elements of drama takes a lot of time
Brings together the class team and improves the overall atmosphere in the classroom	There is an incomprehension among parents and students about the essence and necessity of drama
Promotes the development of a creative person	Inadequacy of classroom organization
Develop the student as a skilled performer and evaluator of performing arts	Teachers lack experience and methodological material; the activities are based on individual experience

When interviewing the experts, in the context of the research goal and research questions, it was important to find out the pupils' benefits from the integration of drama, which is part of the subject area *Cultural Awareness and Creative Self-Expression in the Arts*, along with music, visual arts and literature. Respondents agree that the most important thing is that pupils get to know themselves, are aware of themselves, their values and belonging to society and a certain culture, as well as they develop self-confidence and the ability to communicate with other people: *"It is the most important – through drama pupils would develop the ability to present and to prove themselves, not to be afraid to address other people and be aware of themselves as a value"*.

The experts point out that *"pupils will gain a wider horizon, the ability to perform - to speak, to move, to improvise, as well as to work as a team"*. The benefits for pupils are complemented by the data from other experts on the development of fantasy and imagination, "free flight", the ability to operate in different conditions and environments without fear of making mistakes. It is also important to develop storytelling and collaboration skills and spontaneity - the ability to think and react quickly. The benefits also include the improvement of public speaking skills, teamwork skills, etc. The music teacher and vocal educator admit: *"It is a great art to feel free, to be able to get rid of insecurity and fear, not to feel confined. Also, the ability to change, to take on risk, to tell a story. And yes, cooperation, interaction with both your colleagues and the audience"*.

All the interviewed experts point to the positive impact of drama on the development of a pupil's personality, by mentioning examples such as self-awareness, self-confidence, getting to know oneself and getting rid of fear. Attention is also paid to the improvement of speech skills and diction. The positive aspect is also seen in teamwork and cooperation skills, as well as experts emphasize the development of imagination and the broadening of horizons.

The experts admit that primary school is a period when it is important to encourage pupils not to be afraid to express themselves and to feel relaxed and free. It is important not to lose the elements of play and its transfer in the learning process, which can be done with the introduction of drama as a subject. The answers of the respondents show that it is important to allow pupils to express creatively and encourage them to present their opinion, thus creating a precondition for the development of an open and curious personality.: *"If primary school lessons are monotonous, boring, all new knowledge and skills are more learned theoretically, without the active participation of pupils, in my opinion, we cannot require a high level of curiosity and a desire to know the world comprehensively in the further educational process."*

Besides, experts draw attention to the pedagogue's professional competence to implement drama in music learning and admit that the benefits will depend on how professionally the pedagogues will work with the elements of drama. According to the experts - the teacher's personality, understanding of the change in the teaching approach and the desire to implement it in the work is one of the essential preconditions for the successful integration of drama elements in the new curriculum: *"The teacher must be creative, able to improvise, flexible and ready to take on challenges. Emotionally liberated, knowledgeable in the field. But perhaps the most important thing is that teachers really need to love what they do."*

Questioned about the skills should be acquired already in primary school and what elements of drama should be used for pupils to acquire these skills, the experts hold a strong commitment: "*We have to start with what is formed naturally - role-plays, depictions of stories, sketches on everyday themes. Then continue with fantasy exercises."* Also mentioned was *"...concentration and division of attention, awareness, control, expressiveness of the body. Development of a sense of space. Group cooperation, cooperation (verbal and non-verbal) with a partner. Basics of stage speech, the practice of working with words. Emotions, their acquaintance, manifestations, formation. Various sketches and improvisations."*

Based on the theoretical findings and the data obtained in the interviews, seven aspects were identified – criteria that should be in the focus of drama activities in a variety of subjects, not only music, in order to develop interdisciplinary skills of pupils (see Table 2).

Table 2. Criteria for including drama elements

No.	Criteria
1.	Attention and concentration
2.	Speech development
3.	Imagination
4.	Expressing emotions and feelings
5.	Movement and body language
6.	Spatial sense development
7.	Cooperation

Findings based on observation

In order to answer the research questions and discern good practice examples for integration of drama elements in lessons, detached observation method was used, focusing specifically on the practical use of drama techniques. Before the observation, several schools were identified that employ educators who integrate drama in their lessons. Different grades and different subjects were purposefully chosen. The observation was carried out in four schools according with the criteria, resulting from the data of expert interviews (see Table 2).

During the observation, it was important to document the information in order to record the elements of drama used in the learning process and to be able to better understand their integration methods, as well as to reveal the developmental functions of specific exercises. For this purpose, a pedagogical observation sheet was developed, which records the activities used in the lesson and compiles data on the tasks implemented in the lessons. The authors distinguish two types of tasks:

1. Tasks in which elements of drama are integrated into the curriculum and related to the subject matter (see Table 3);
2. Training-type tasks aimed at developing pupils' skills (see Table 4).

Table 3. Tasks in which elements of drama are integrated into the curriculum and related to the subject matter

Activity/task	Attention and concentration	Speech development	Imagination	Expressing emotions and feelings	Movement and body language	Spatial sense development	Cooperation
"Voice-echo". The teacher tells a fairy tale about a wolf; the students repeat it quietly every time the teacher says the word "wolf".	X	X					
"Show me!" Children are free to leave the classroom. The teacher says, "Show me how the owl's dad sleeps?" (pose) "How did the owl's dad react when the wolf came in?" (emotion).			X	X	X		
"How did the fairy tale end?" The pupils are divided into pairs. The task is to figure out how the fairy tale ended and show it by playing a dialogue. One of the children is a wolf, the other can get into any of the characters in the fairy tale or come up with another image. Preparation time - 1 minute. Then the performance begins.		X	X		X	X	X
Students walk freely one by one in the classroom. Task - go to the place where there are the fewest children, avoid a collision with a classmate, stand under a snow cloud, if there is free space (the cloud is attached to the	X	X	X			X	X

ceiling in the middle of the class) When the child is under the cloud, he says: "Christmas is approaching, so today I am… because… "							
"Christmas card". Work in groups of four. Using the available properties, bring out a live photo - a Christmas greeting showing all four members of the group. (Pose, facial expression, emotion). A photo is taken.			X	X	X	X	X
The group chooses one of the offered items (ball, mug, pillow, broom, bucket, book). The task is to prepare a video advertisement for this item, which will be shown on TV at Christmas. There are specific criteria for creating an ad. Each group presents their prepared advertisement to the class.		X	X	X	X	X	X
Prepare eight riddles on a given topic. Ask the class to unriddle.		X	X				X
Write a fairy tale on a given topic using dialogues. Divide roles. Expressively read a fairy tale.		X	X	X			X
Create a sketch on a given topic and present it to the classmates.		X	X	X	X		X

Table 4. Training-type tasks aimed at developing pupils' skills

Activity/task	Attention and concentration	Speech development	Imagination	Expressing emotions and feelings	Movement and body language	Spatial sense development	Cooperation
"Morning training". Two trainers have been selected in the class, who have prepared exercises. At the beginning of the class, the trainers come out in front and lead the training, the rest mirror the movements.	X				X		X
Pupils form a circle. After the call "Hey", they clap their hands to the right 7 times, 7 times to the left. This is followed by clapping hands 6 times to the right, 6 times to the left, then 5, 4, 3, 2 and 1 time. Complete the task in 3 minutes or as long as you succeed.	X				X		
The children form a circle. Movement - step back and forth, step back and forth. When everyone enters the rhythm, the teacher says a word, the children say the associations that must not be repeated. In the first round - an association with one word, in the second with two.	X	X	X		X		
Pupils are in a circle, one says a word, another adds another word, a third already says a three-word sentence, and so on.	X	X	X				X
Pupils split into pairs, one showing movements, the other mirroring. Then change the roles.	X				X		X
Revived photography. The teacher tells where the photo was taken (at the factory where the shoes are made). Students create an image that could be taken in		X	X	X	X	X	X

this factory, each taking a pose, showing emotions on their faces. Then one by one step out of the photo and tell others who he/she is, what is doing here and how feels.		
Pupils stand in a circle with their backs to the centre. Task - count from 1 to 12. Condition - each number can be called only once; if you name two or more at a time, then you have to start from the beginning.	X	X

The data summarized in Tables 3 and 4 reveal the possibilities of multiple uses of drama elements for the development of pupils' abilities and personality. They can be combined also with the tasks necessary for learning music. Practically all tasks are organized in a way to cover the widest possible sphere of development - development of attention and concentration, promotion of cooperation skills, development of speech, imagination and movement, body language and sense of space, as well as the promotion of emotions and feelings.

Results

The findings of the theoretical and empirical study point to the conclusion that drama elements can serve as a valuable tool for the perfection of sustainable music learning and self-expression opportunities. In music classes, when acting skills and drama techniques are used, pupils can get to know themselves better and develop communication skills, empathy, creativity and confidence. They act casually, not afraid to make mistakes because the activity is associated with play. Pupils can learn from each other, as well as to cooperate, which stimulates their interest, the activities performed remain in memory and thus promote the understanding of the subject.

This confirms that by including elements of drama, music is not only a means to achieve learning outcomes in various subjects, but it also promotes sustainability music education. This is in line with the findings of Østergaard (2019) and Sterling (Sterling, 2001; Sterling et al., 2017) on sustainability competencies, which can also be developed in the music learning process. Analysing the data obtained in the interviews, it can be concluded that the elements of drama can be used in practically all subjects, but it is most successful in the humanities, which include languages, arts and social sciences. Non-traditional learning stimulates pupils' interest in the learning process and helps them to better perceive and store information. Practical activities have a positive effect on the pupils' senses, thus promoting a better understanding of the subject matter. It is also important to use elements of drama in the classroom to promote student cohesion and cooperation.

Drama is a new subject included in the subject area *Cultural Awareness and Self-Expression in Arts*. It is planned to integrate it into the primary school curriculum - music and visual arts lessons (Kultūras izpratne un pašizpausme mākslā, 2019). However, each change brings with it the uncertainty of how to implement the innovations, which are introduced by pedagogues-teachers with different work experience and experience. Therefore, innovations are often interpreted differently. Situations arise when there is a misunderstanding about novelties, their approbation and, consequently, the provision of a high-quality pedagogical process. The findings of the study show that teachers lack an understanding of the opportunities offered by the new subject and its methodology.

When working with elements of drama, the main form of work organization is the pupils' creative activity both individually and in the group. In this form, teaching and learning take place continuously, as pupils not only have to learn the specific theme of the lesson but also learn to express themselves, to collaborate, to present themselves and to justify their actions. In this process, the teacher acts as a consultant - coordinates the work, provides instructions on the task to be performed, draws attention to the result to be achieved and helps to provide feedback. At the same time, in order to achieve the goals, the teacher's actions must be very well considered and understood by the pupils. Throughout the lessons, teachers tried to use a variety of methods and exercises to encourage pupils to participate actively. Technological devices were also used - an interactive whiteboard and a tablet computer, which indicate the teachers' ability to work innovatively and creatively. Also, in the context of the competency-approach, interdisciplinary skills are of great importance, with a special emphasis on open-mindedness, creative thinking and self-expression (Andersone, Kalniņa, 2018; Avotiņa et al., 2018; Skola2030, 2017).

However, interviews reveal that teachers also have various uncertainties about the integration of drama elements in the curriculum. One of them is the lack of methodological material, which would need to be tested in order to work successfully with it during the school year. Teachers also believe that some educators lack understanding and information about drama as a method of pedagogy, because practically all teacher have some colleagues who are sceptical about the introduction of this subject, stating that: *"...everyone will never be an actor"*. Teachers recommend intensive involvement of pupils in nonformal education - student theatres, stage speech groups, theatre sports, as well as vocal ensembles, choirs and popular music ensembles, as all these types of interest education promote active student activity, raise self-confidence, improve performance skills in front of the public, develops creativity in students and promotes self-expression.

The theoretical and empirical study confirm that pupils' creativity and personal development are promoted by the teachers' creativity, diversity of teaching methods and ability to apply them, as well as a comprehensive view of the subject matter. In subjects included in the area *Cultural Awareness and Self-Expression in Arts*, it is important to use rational techniques for developing skills and competencies, such as drama elements, that promote sustainability skills (Leitāne, 2018; Katane, Kļava, 2018; Vorošilova, 2018; Skola2030, 2017). Thus, diversity of teaching methods and reasonable choice, based on purposeful progress towards the achieved result, is the basis for the effectiveness of the lesson.

Conclusions

The findings have helped to reflect on and critically evaluate the challenges, as well as draw the conclusions. The aim of the improved curriculum and competency-based approach is to make learning relevant, prevent content fragmentation and overlapping of the information, ensure continuity of curriculum, promote the understanding of interdisciplinarity, and support pupils' abilities to apply knowledge in different sustainable education contexts.

The results of the study reveal the criteria that should be in the focus of drama activities in the curriculum of primary school, including music, in order to develop interdisciplinary skills of pupils: (1) attention and concentration, (2) speech development, (3) imagination, (4) movement and body language, (5) spatial sense, (6) expression of emotions and feelings, and (7) cooperation. The identified criteria can serve as the grounds for developing methodological materials and kinds of exercises to be implemented in both the music lessons and the curriculum of primary school.

The study confirms that drama elements can be successfully integrated into the music curriculum of primary school, by extending theoretical and practical knowledge and developing new mindsets grounded in competency-based education requirements, thus, promoting interdisciplinarity and sustainability of music education. The identified criteria can serve as the grounds for developing methodological materials and kinds of exercises to be implemented in both the music lessons and the curriculum of primary school.

The outcomes of the research raise considerations of strategies for strengthening cross-curricular links and ensuring effective cooperative partnership among teachers, as well as providing regular feedback and critical self-reflection.

Plagiarism Rate = 0%

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Using a Creativity-based Learning Approach to Enhancing Product Creative Skill of Undergraduate Students in Communication Arts under COVID 19: The Case Study of Sripatum University, Thailand.

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Abstract
The aim of this studied was; 1) to study strategies of lecturers who using a creativity-based learning approach to enhance the product creative skill of undergraduate students in communication arts under COVID 19 situation and 2) to studied tools and techniques for fully online creativity-based learning approach. At that period, any instructor could not arrange their class as face-to-face as the traditional way. The fully online teaching was replaced every course differently but lead the students to create a new idea of presentation and products as the learning outcome. The methodology of this studied was an in-depth interview with the dean, faculty members, and students and present the results with descriptive analysis. The results found that lecturers used a flipped-classroom model by using a creativity-based learning approach with the “fully online” by using Zoom meeting for synchronous learning and Learning Management System : LMS (Moodle) which contain content and scaffolding will be help student to create a creative product as asynchronous learning. Line group, Facebook messenger and Facebook close group as communication tools could help students to share an idea and collaborate with their team on a fully online course. The student used any kind of online presentation technique like making a video clip presentation and used "The Sims™ 4" (for PC/Mac) to simulate their product idea. The creative product of communication arts undergraduate students is a novelty, a resolution and elaboration, and synthesis of new things. The effects of the COVID 19 process changed educational systems of Institution and this result would be adapted into the lifelong learning for the alumni and anybody who need to enhance product creative skill.
Keywords: Creativity-based learning, creative product, communication arts, COVID 19

Introduction

Nowadays, many educational institutions are interested and focus on teaching their students to be creative by teaching and learning by doing (Rasmussen & Sörheim, 2006, pp. 185–194). There are also efforts to promote and design guidelines for learners to learn from experience (RG & MacMillan, 2000, p. 340) increase critical thinking skills and decision-making attitudes for learners (Solomon et al., 2002, pp. 65-66). Especially in communication arts students, it is necessary to develop creativity. Because of the broadcasting business and others job in the communication arts area must be a creative work. That is the key to driving and developing content. As well as creating a form of an interesting presentation.

Creativity-Based Learning (CBL) is one of the methods of student-centered teaching and learning. Which the main structure of creative teaching is base on a problem-based teaching and learning structure (Problem-based learning : PBL) and the way to develop the parallel thinking of Edward de Bono, which is the way to manage learning for the 21st century. The CBL process as a base to helps lecturers to drive students learning experience, promote teamwork, support research, related to interpersonal communication through individualized solutions that collaborate on projects and teamwork. In which the learners will change from listening and reading the lesson content to work with their own teammates to solve real-world problems (Michaelsen et al., 2014, p. 232), using CBL processes will help learners become independent and be able to make appropriate decisions (Ruechaipanit, 2015, pp. 26-30)

Communication arts students are necessary to develop their creativity. The creative product is very important competency. A cornerstone of the drive and content development as well as creating a news "thing". But due to COVID 19 pandemic, all of lecturers and instructors could not arrange their class as face-to-face as the traditional way. The effects of the COVID 19 changed the process of educational systems in many institutions. University in Thailand has been shut down from March 15, 2020 to June 30, 2020. The fully online pedagogy was replacing face-to-face teaching. The instructor's change their teaching style to be online learning by maintaining the same "learning outcome".

Blended learning by used flipped-classroom combined with the creativity-based learning process (CBL) will be able to promote creative product skills. The development and creative presentations will be promoted through an action and evaluation of creative product skills from creative works of learners which is considered a novelty, problem resolution or resolution, and elaboration and synthesis. in which the combination of flipped-classroom learning and CBL process based will be able to promote a positive feeling level, increasing independence in creativity, attract learners to a life-long learning (Roehl et al., 2013, p. 74). In which research results will create knowledge the way to develop students to be a good communicator that can adapt themself to the world after COVID era.

Problem statement

1) What are the strategies of lecturers who using a creativity-based learning approach to enhance the product creative skill of undergraduate students in communication arts under COVID 19 situation?
2) What are the tools and techniques for fully online of creativity-based learning approach at Sripatum University, Thailand and how they used?

Method

The method of the research is qualitative research by using in-depth interview methodology. The population is an instructor and students, faculty of communication, Sripatum University, Thailand.

The study group is the dean faculty of communication, Sripatum University, Thailand, 6 instructor members and 15 students.

Data collection tools is a semi-structured interview has been arranged which the interviewer does not strictly follow a formalized list of questions. Instead, they will ask more open-ended questions, allowing for a discussion with the interviewee rather than a straightforward question and answer format. The reliability and validity of data explore appropriate strategies used "thick descriptions" (Geertz, 1973), and variation in participant selection. Dependability can be established through audit trails and triangulation. Confirmability is established through reflexivity or intra- or inter-coder reliability, where applicable. An analysis technique is a descriptive analysis.

Findings

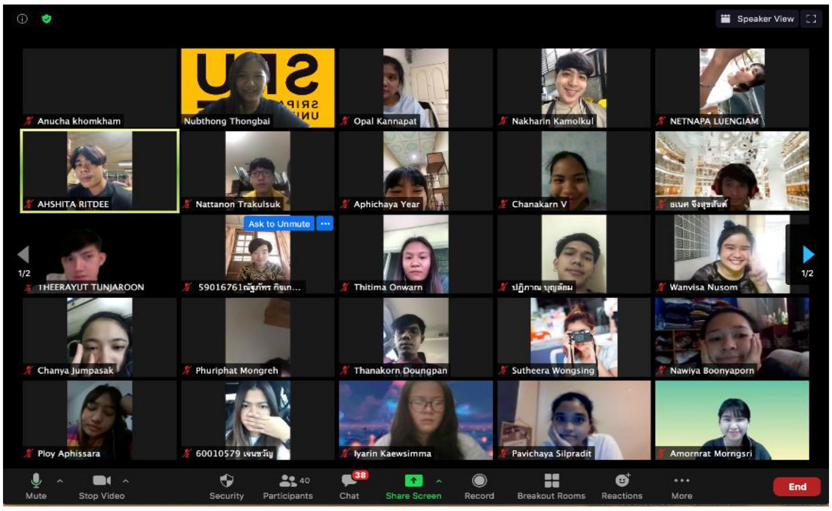
1) Strategies of faculty of communication arts lecturers, Sripatum University, Thailand.

- ZOOM Cloud meeting training 1 by 1 had been arranged by the staff of the office of online education (OOE) on March 10-20. All instructors at Sripatum University adapt themselves to be an online instructor "overnight". Virtual background of Zoom cloud meeting has been used for simulation many lessons, the green screen has been used for a better quality of the creative idea presentation

- The fully online teaching was replaced every course differently but lead the students to create a new idea of presentation and products as the learning outcome. Many instructors used “Zoom" for synchronous teaching.

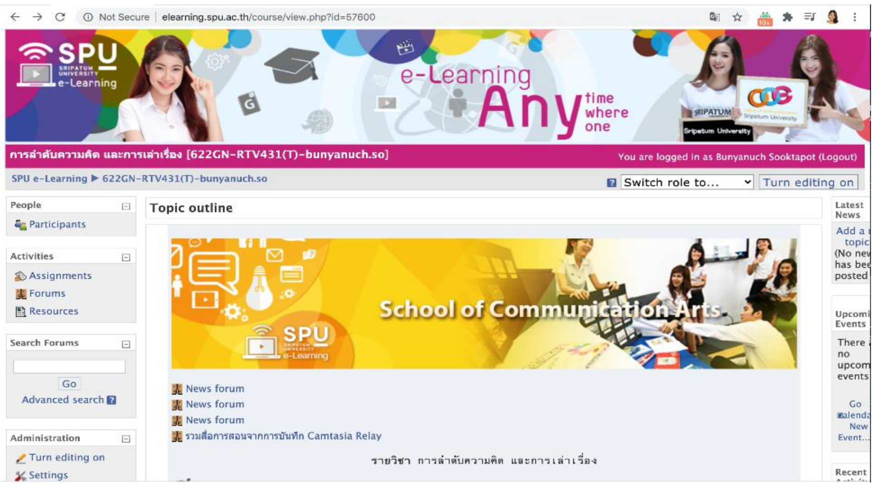
Picture 1. Virtual background of Zoom cloud meeting

Picture 2. Zoom cloud meeting as a tool for creative teaching



- LOOM and Vidyard has been used for making a video on demand.
- The flipped classroom model has been integrated into the learning management system (LMS)
- LMS (Moodle) which contain content and scaffolding will be help student to create a creative product as asynchronous learning

Picture 3. Sripatum university learning management system (SPU-LMS)



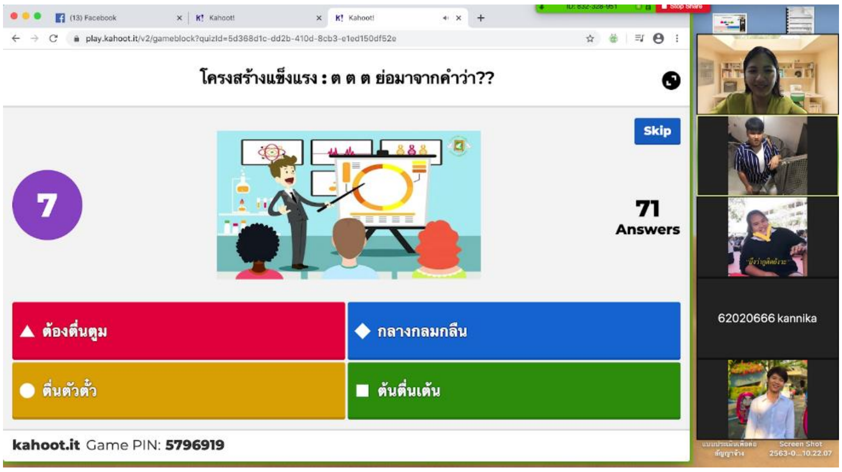
- G-mail, Line group, Facebook messenger, and Facebook close group had used for a communication tools that could help many students to share an idea, collaborate with their team on a fully online course.
- The student used many kind of online presentation technique like making a video clip presentation and used "The Sims™ 4" (for PC/Mac) to simulate their product idea. Such as a television production style.
- The creative product of communication arts undergraduate students is a novelty, a resolution and elaboration, and synthesis of new things.

Picture 4. The Sims™ 4"as a tool for television studio production idea presentation via Zoom

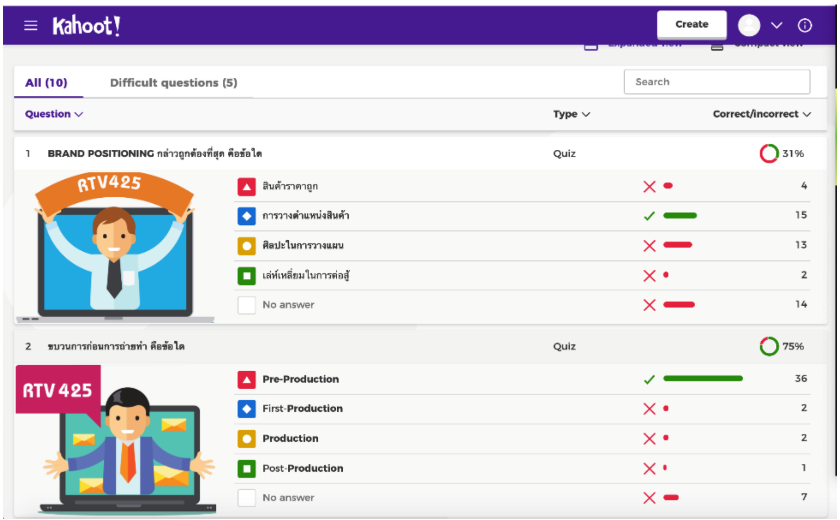
2) Tools for online teaching during COVID 19 of Sripatum University instructor
- ZOOM cloud meeting as a tool for fully online teaching
- SPU-LMS (Learning Management System: Moodle) had used for containing the video on demand link
- Facebook close group and Line Group had used for a communication tool

- Many applications such as Kahoot (Premium), Mentimeter, Quizzes, Padlet had used for collaborative teaching, involves educators working in tandem to lead, instruct and mentor groups of students.
- PowerPoint Presentation (PC) / Keynote Presentation (Mac) had been upload into SPU-LMS as a knowledge management.
- YouTube Channel has used for publication student's creative product idea.

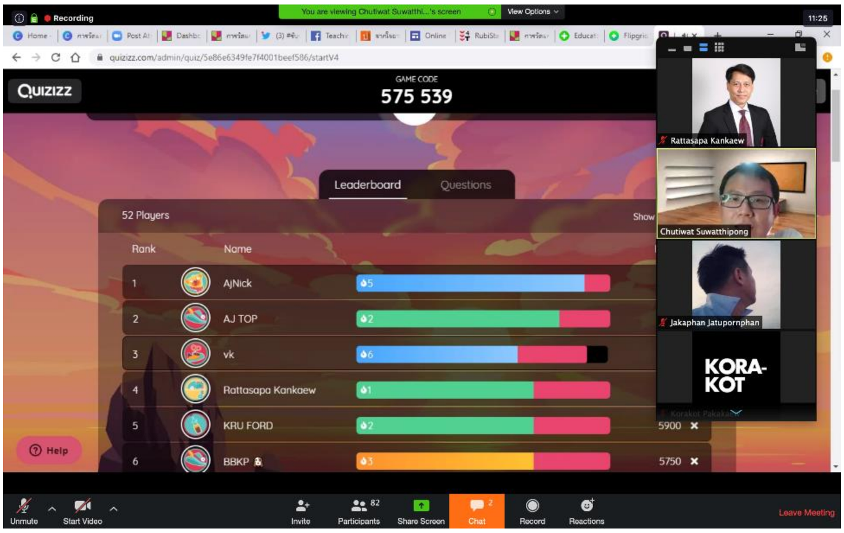
Picture 5. The used of Kahoot as a collaborative teaching tool via Zoom



Picture 6. Result of Kahoot for CBL teaching



Picture 7. The training of Quizizz as a competitive teaching tool via Zoom



Picture 8. Student used Facebook group and YouTube for presentation

Results, Conclusions and Recommendations

Under COVID 19 situation. The fully online teaching was replaced every course differently but lead the students to create a new idea of presentation and products as the learning outcome. The results found that lecturers used a flipped-classroom model by using a creativity-based learning approach with the “fully online” by using Zoom meeting for synchronous learning and Learning Management System : LMS (Moodle) which contain content and scaffolding will be help student to create a creative product as asynchronous learning. Line group, Facebook messenger and Facebook close group as communication tools could help students to share an idea and collaborate with their team on a fully online course. The student used any kind of online presentation technique like making a video clip presentation and used "The Sims™ 4" (for PC/Mac) to simulate their product idea. The creative product of communication arts undergraduate students is a novelty, a resolution and elaboration, and synthesis of new things. The effects of the COVID 19 process changed educational systems of Institution and this result would be adapted into the lifelong learning for the alumni and anybody who need to enhance product creative skill.

The results of this study in an area of learning outside the classroom or homework. A study from instructional videos, exchange online learning and online exercises, content, and support bases are consistent with the research of Hongkhunthod (2015, pp. 173-174) that was studied and developed the flipped-classroom learning system. While using the steps of learning activities in the classroom to focus on the CBL process was consistent with the concept of Ruechaipanit (2015, pp. 26-30) which describes the important steps to succeed in CBL teaching. While the characteristics of creative product in communication arts from learning pedagogy in COVID 19 pandemic consistent with the Besemer (2006, pp. 48-55) that studies the characteristics of creative works in the context of the United States of America.

Using video on demand of CBL process in COVID 19 for an online classroom activities at home was in line with the concepts of Bergmann & Sams (2012, pp. 55-58) that studied how to use the 5-7 minute video for teach his students from home. And spend time in the online classroom to assigning students to practice, interact, discuss, or experiment. While the teaching design based on CBL consistent with the results of Jetsadawiroj's study (2017, pp. 1-8) in the study of creative learning processes for children course.

The result of this research found that the behavior of students has a positive relationship with the creative products. This is consistent with the Suwan (2017, pp. 7) which found that creative teaching methods are the basis to encourage learners to learn and create necessary skills in the 21st century.

Suggestions for future studies

1) Study in terms of forms, characteristics, and methods of teacher assistance that influence of skill promotion of learners or may have a comparative study under COVID-19.
2) Study by experimenting with creative learning processes as a base to stimulate creative thinking skills or creative skills of learners through online learning together with virtual classrooms.
3) Study the product creative skill with a life-long learning style in different situation

Plagiarism Rate = 3.2%

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English Vocabulary Enrichment in Non-formal Adult Education during International Non-language Training Courses

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Abstract
In recent years, various international mobility projects involving training sessions for adults apply learner-centred group work or workshop format instead of the traditional teacher-centred lecturing style. Group work is the form of organization of the study process that requires communication, cooperation and interaction to fulfil tasks therefore communication is an important aspect used by project participants from different countries to organize their work and cooperate with one another. Spoken language is used to express ideas and thoughts therefore listening to peers and the perception of speech in English become an integral component of the learning process. Thus one of the benefits of the training is the improvement of the English language proficiency and enrichment of English vocabulary of participants during the training sessions. The vocabulary in such non-formal education is acquired incidentally which involves learning English words and phrases by engaging in various communicative activities, pair work and group work in order to learn the content of various subject fields. Learning happens through active participation in such activities as questioning, clarifying opinions, sharing ideas, making handouts and posters, giving a presentation of the group work that corresponds to the main features of non-formal education: learn by doing, which means acquiring different skills and abilities in the practical action, learning from experience and learning within a specific process. Participants are involved in three stages that account for a word in a foreign language being remembered: noticing, retrieval and generative use in the context of the given topic. The present paper analyses the results of the survey of the participants of various international projects regarding their experience of the enrichment of the English vocabulary during training seminars. The conclusion gives a summary of the research findings focusing on the respondents' personal experience, specific activities, the acquired general vocabulary and specific terms in the subject field.
Keywords: learner-centred approach, English vocabulary, incidental vocabulary learning, non-formal adult education

Introduction

In recent years, various international mobility projects involving training sessions for adults apply learner-centred group work or workshop format instead of the traditional teacher-centred lecturing style. The authors of this article have participated in several international education projects thus gaining new knowledge and experience themselves in non-formal education, for example, Nordplus adult education projects "Save the world green" (2018), "Design thinking method for creative tackling unemployment" (2019), Erasmus+ projects "Adults' problem-solving skills enhancement strategies enabling to improve personal resilience" (2017) and "You(th)r Culture" (2019), as well as a learning mobility projects of individuals in the framework of Erasmus+ programme. All courses mentioned above were designed as an open learning process based on participants' experience and exchange. The training courses followed the non-formal education approach combining different creative and interactive methods. Most often training sessions were organized as a group work. Group work is the form of organization of the study process that requires communication, cooperation and interaction to fulfil tasks therefore communication is an important aspect used by project participants from different countries to organize their work and cooperate with one another. Group work is also consistent with the constructivist approach to education. The international projects involve multicultural teams which is an additional challenge regarding communication and insufficient English language skills, since Nordplus and Erasmus projects use the English language as the language of communication which is a foreign language to participants. On the other hand, group activities and collective action to achieve the goal of the group in training courses may serve as beneficial environment for acquiring the English language, particularly for enriching the English language vocabulary. The vocabulary in such non-formal education is acquired incidentally by engaging in group work activities, listening to members of the group and a trainer because the participants' attention is focused on the meaning of words in context. The aim of the paper is to explore the experience of adult learners of acquiring English vocabulary in the format of non-formal education during international non-language training courses by engaging in various communicative activities, pair work and group work in order to learn the content of various subject fields. The research question is the following: do participants of international training courses enrich their English vocabulary by learning new words incidentally during group work communication, cooperation and interaction with participants from different countries in workshops? The target audience include participants of international training courses of non-formal adult education from various NGO's.

Method

The research methodology was developed based on the analysis and assessment of scientific literature and a number of information sources taking into consideration the authors' reflection experience and observations in connection with the English vocabulary enrichment in non-formal adult education.

The research method was the case study of how participants of non-formal adult education improve their foreign language skills during international mobility projects involving non-language training courses. As part of the case study, the survey of participants of such training courses was carried out. An online questionnaire was prepared and the link of the questionnaire was sent to the social media network of non-governmental organizations which actively participate in various international projects. The questionnaire included different types of questions: (1) respondents were given several statements and asked to mark the most appropriate option, (2) some of the answers to the questions were to be given by expressing approval or rejection on four-step Likert scale, (3) short answers (e.g., yes/ no), (4) open questions. The questionnaire in Latvian is available on the Internet at: http://www.iipc.lv/surv/index.php/182373/lang-lv. The study used self-assessment method. Self-assessment is the process by which students gather information about their performance or progress. A review of the scientific literature leads to the conclusion that the goals of the self-assessment method are to identify the strengths and weaknesses of one's work in order to make improvements and promote learning (Andrade & Valtcheva, 2009).

As it was mentioned above, the training seminars in the international mobility projects in non-formal adult education often have a group work format organized in workshops which usually last from seven to fourteen days. Group work is the method of learning and the form of organization of the study process that requires cooperation, interaction, and communication to complete a task. Communication is an important aspect used by group members to organize their work and cooperate with one another (Marks, Zaccaro & Mathieu, 2000). Spoken language is used to transform individual thought into collective thought and action but also to make personal interpretations of shared experiences (Mercer, 2002). The group work in adult education is compared with peer learning where peers should learn from each other, and peer learning can be described as the way to moving from individual learning to interdependent or mutual learning (Boud, 1988). Learning happens through active participation in such activities as questioning, clarifying opinions, sharing ideas, making handouts and posters, giving a presentation of the group work that corresponds to the main features of non-formal education: learn by doing, which means acquiring different skills and abilities in the practical action, learning from experience and learning within a specific process. Group work format requires a relevant arrangement of the learning venue, i.e., the classrooms are arranged in a way that allows free and creative atmosphere either with chairs around the walls of the room and an empty central part, or the tables are placed in the middle with chairs around them. Sessions are learner-centred, therefore a trainer has the role of a facilitator rather than a lecturer. The vocabulary of the English language in such non-formal education in the international environment is acquired incidentally which involves memorizing English words and phrases by engaging in various communicative activities, pair work and group work in order to learn the content of various subject fields and topics. Due to the group work format, listening and speaking dominate during international training sessions therefore vocabulary enrichment mostly takes place during oral communication. As regards vocabulary enrichment while listening, a distinction is made between incidental and intentional vocabulary learning. Intentional vocabulary learning means memorizing words (their meaning, sound, and spelling) during language classes in educational settings or individually, while **incidental** vocabulary learning involves the “picking up” of words and phrases by engaging in various communicative activities, during which the learner’s attention is focused on the meaning in context rather than on the form of language (Hulstijn, 2008). The two main tasks of the listener in word recognition are the identification of words and activating knowledge of word meanings. Because a normal speaking rate has about eight words per every two-to-three second run of speech, word recognition must occur very quickly in the listening process (Brazil, 1995). Unknown words, if they are recognized, should be remembered. According to I.S.P. Nation, there are three processes that account for a word in a foreign language being remembered: noticing, retrieval and generative use; “noticing” means creating the awareness of the word and it happens when learners search the word in the dictionary, learn it purposefully, guess from context, or words are explained by teachers or peers; “retrieval” involves recall of the previously studied or noticed words, “generating” means a creative use of the word in different tasks (Nation, 2006). Nation also mentions that motivation and interest are important enabling factors for noticing and that the content of the text can stimulate interest (Nation, 2006). The effectiveness of incidental vocabulary learning is closely connected with the role of the context. Contextual clues to meaning come from knowledge of the particular situation, i.e., speakers, the setting, the topic, the purpose of the spoken discourse and from knowledge of what has been said earlier (Ozola, 2015, Rost, 2002). Since non-formal adult international training courses are devoted to some specific topic, the context is given, the purpose of the talks is clear to participants and communication activities are sequenced in the way that previous discussions are continued and the participants have the knowledge of what has been said earlier.

Findings

In total 48 random participants of various international non-language training courses took part in the online survey. The demographics of the participants of the survey shows that the majority of respondents were women (71.79%) in this study. It could be explained by a tradition in Latvia that mainly women are employed in education. Women more actively are involved in various lifelong learning activities. The respondents’ answers reveal that the most active participants of various non-language training courses within the framework of adult education on topical issues that take place in English are people over 53 years of age (35.9%), which can be explained by the need to improve professional qualification in connection with the increase of labor market requirements. According to the results of the survey, the participants of international training courses most often have the intermediate English language proficiency level (38.46%). One third of respondents (33.33%) answered that they had participated in international mobility professional development courses more than three times, but 30.77% of participants had participated only once. Of those who have participated in international mobility professional development courses more than three times, 69.2% have the intermediate English language proficiency level, but 23.07% have the advanced level. None of the male respondents have the basic English language proficiency level.

The characteristics of the sample is given in Table 1. It should be noted that not all respondents answered all the questions.

Table 1. Sample Table

Quality	*Category*	*Percent (%)*
Gender	Female	71.79
	Male	10.26
Age	18-28	2.56
	29-40	17.95
	41-52	25.64
	53-65	35.9

How often have you participated in international mobility professional development courses within the framework of adult education on topical issues that take place in English?	One time	30.77
	Two times	10.26
	Three times	7.69
	More than 3 times	33.33
Self-assessment of English language skills	Basic level	28.21
	Intermediate	38.46
	Advanced	15.38

The authors asked the respondents to reflect on their vocabulary improvement during courses. Thus almost one half of respondents (48.72%) considered that they had enriched or quite enriched their English vocabulary, but one third (33.34%) answered that very little or not at all. The answers of respondents revealed that participation in international projects and mobility training courses in informal atmosphere had a positive impact on the development of English as a foreign language.

Vocabulary learning is crucial for learning foreign languages. Whereas the aim of this study was to investigate the experience in learning English vocabulary within non-formal education during international non-language training courses, the respondents were asked to express their attitude towards the statement: “During the training, the acquisition of new words took place according to the following scheme: *noticing an unknown word - retrieval of the word - using the word in the one's own speech"*. The findings showed that 28.21% of respondents strongly agreed with this statement, 41.03% - agreed, but almost one third (30.77%) did not have an opinion on this issue.

The questionnaire also included an open-ended question where respondents were asked to describe their experience of learning new words in English during international training courses in a few sentences. The research results show that some respondents noticed an unknown word during communication activities, usually an important meaningful word, which was then repeated in the vocabulary of other speakers, as well as in posters or reports on topics learned during the previous day. However, it was not always possible to immediately remember new English words if the unknown word had not been immediately written down. If it was written down, it could be included in vocabulary later. The respondents claimed that if they had previously prepared and learned the words of the relevant topic, it helped and learning was faster. Some participants said that they remembered very well when they saw, heard and learned new words only in context. It should be noted that the words "stuck" themselves for some respondents.

In general, the answers included the above scheme: noticing an unknown word in the speech of others or in the text of a different nature, translation of the word and in-depth study of it in different contexts; note-taking of the unknown / new word, word recognition in the participants’ speech; use of the word in one’s own speech. For those respondents who attended international training courses more than 3 times, enrichment of their English vocabulary was a process that had been going on for years and over time it has already become automatic and inevitable.

Respondents with advanced English language skills heard unknown words very rarely, but when they did hear them, they definitely remembered them. They pointed out that the problem with international courses was the English proficiency level of other participants with less vocabulary. As regards participants with lower English proficiency level, their vocabulary expanded significantly at international events during group work with participants from other countries.

The authors of this article have identified three factors that influence the enrichment of English vocabulary during international training: (1) self-motivation of participants of international training courses, (2) encouraging learning environment and (3) self-directed learning skills of participants.

Various educational scientific sources confirm that motivation for achievement depends on the need for education in the society in general and at the given moment and place, the personal interest and ambition of the learners depending on the result and practical skills. The authors of this article are also convinced that if learners are motivated, learning outcomes are better. It has to be mentioned that the motivation has inner interests, wishes, opinions and encouragement which make people act. It is known that learning is self-initiated, and often involves the processes of enquiry and discovery (Brandes & Ginnis, 1986). According to Brookfield S. D., participation in learning is voluntary: adults engage in learning as a result of their own volition (Brookfield, 1986). In order to characterize the training courses participants' motivation, respondents were asked if their aims for international training courses also included enrichment of the vocabulary in English. 38.46% of respondents gave a positive answer, 17.95% of them gave a negative answer but slightly more than a quarter (25.64%) had not previously thought about such a possibility, which meant that their attention was not focused on enriching the English vocabulary or memorizing new words.

The authors hold the view that learning environment influences learners' cognitive, social, emotional and physical development. Based on Shaeffer S., learners' active learning includes a stimulating learning environment and methods that are best suited to developing critical thinking and problem-solving skills (Shaeffer, 1990). He emphasizes the importance of the environment as a learning resource for better learning. Thus, the respondents were asked about a pedagogical method used during the international training courses. The results showed that the group work was used in 64.10% of cases. It means that there is a prevailing trend to arrange international training courses in the form of group work instead of an old-fashioned lecturing style. The focus in the group work method is on learners, they are active participants. Although the traditional teaching method of lecturing as a one-sided transfer of knowledge to learners is not recognized as an effective teaching method either in scientific literature or in practice, a third of respondents (33.33%) claimed that it was used during the international training courses. The respondents were also invited to evaluate the effectiveness of the methods used. 71.11% of respondents rated group work as a very effective or efficient method of enriching respondents' English vocabulary. In their assessment, the most significant contribution to the enrichment of vocabulary was made by group work - in 46.15% of cases. It must be admitted that formal lectures also enriched the English vocabulary for 13.33% of respondents. An important contribution to the improvement of the English vocabulary during international training courses was made by social events (joint events, excursions, etc.) (in 58.97% cases).

Another factor that characterizes the learning environment refers to the placement of furniture in the rooms during the training. The survey results are depicted in Table 2. The option "other" includes answers that the rooms were arranged differently depending on the task, e.g., chairs in a circle, movements of participants, activities, etc.

Table 2. Placement of furniture in the course rooms during the training

Statement	*Percent (%)*
The room is prepared for a lecture: chairs are arranged in rows	33.33
The room is prepared for group work: tables and chairs around them	46.67
The room is prepared for group work: empty room - chairs along the edge	22.22
Other	11.11

The authors of the paper suggest that "self-directed learning" which refers to adult education is an important factor to achieve positive results. Self-directed learning "originates from adult education: practiced mainly outside traditional school environment; involves designing learning environment; involves planning learning trajectory; broader macro-level construct" (Saks, Leijen, 2014, 193). Accordingly, participants of adult training courses take initiative about learning and are responsible for the results, they control their own learning process. To characterize participants' self-directed learning skills, they were asked what methods they used to find out the meaning of a new word during the international training courses. The most popular method was guessing the meaning of the word from the context. As seen in the Table 3, different methods were used by participants to find out the meaning of an unknown word. As regards the option "other" the respondents gave the following answers: there were no unknown words, respondents asked other participants from Latvia to translate words into Latvian or participant from the Baltic States into Russian. Such techniques of finding the meanings of new words as asking a group member to explain the meaning of an unknown word in English, looking for the meaning of the word in the electronic dictionary of the telephone during the lesson and writing down the unknown words and later looking at their translation signify well developed self-directed learning skills of participants.

Table 3. Methods used to find out the meaning of an unknown word

Methods used	*Percent (%)*
Guessed the meaning of the word from the context	58.97
Asked a group member to explain the meaning of an unknown word in English	41.03
Looked for the meaning of the word in the electronic dictionary of the telephone during the lesson	23.08
Wrote down the unknown words and later looked at their translation	20.51
There were too many unknown new words, it was difficult to follow the conversations in classes	10.26
Other	10.26

The authors were willing to analyse the techniques of participants for finding meanings of the words with regard to the English language proficiency level and the frequency of participation in international training courses. Thus two thirds of participants with an advanced level of English guessed the meaning of the word from the context, one third - asked a group member to explain the meaning of an unknown word in English and also during the lesson looked for the meaning of the word in the electronic dictionary of the telephone. The methods used by participants with basic level of English language skills are given in the Table 4.

Table 4. Methods used by participants with basic level of English language proficiency

Methods used	*Percent (%)*
Guessed the meaning of the word from the context	46.15
Asked a group member to explain the meaning of an unknown word in English	38.46
Looked for the meaning of the word in the electronic dictionary of the telephone during the lesson	27.27
Wrote down the unknown words and later looked at their translation	15.38
There were too many unknown new words, it was difficult to follow the conversations in classes	30.76

Male respondents claimed that there were no unknown words and it was not difficult to follow the conversations in classes, while it was difficult to follow conversations as there were too many unknown new words for 14.29% of women. Female respondents most often guessed the meaning of the word from the context (64.28%), the second most popular method was asking a group member to explain the meaning of an unknown word in English (46.42%). Other methods were equally important (in the range of 15-20%). The comparison of the use of methods for finding the meaning of unknown words and the frequency of participation in international non-language training courses within the non-formal adult education non-language training courses within the non-formal adult education revealed an interesting correlation (see Table 5)

Table 5. Methods depending on the frequency of participation in international training courses

Methods	One time (%)	Two times (%)	Three times (%)	More than 3 times (%)
Guessed the meaning of the word from the context	58.33	75.00	33.33	92.30
Asked a group member to explain the meaning of a new word in English	50.00	0	66.67	61.53
Looked for the meaning of the word in the electronic dictionary of the telephone during the lesson	25.00	25.00	35.05	15.38
Wrote down the unknown words and later looked at their translation	25.00	25.00	28.76	23.07
There were too many unknown new words, it was difficult to follow the conversations in classes	25.00	0.00	0.00	0.00

More experienced participants of international training course had developed the skill of guessing the meaning of unknown words from the context (92.30%), therefore they did not need to use other methods so much although team work skills were used in 61.53% to ask a group member for the explanation of the new word. Consequently, the most popular methods of **noticing** unknown words in the stream of speech were guessing the

meaning of the word from the context, and asking a group member for the explanation of the meaning for most of participants of non-formal education international training courses irrespective of their level of English language proficiency and
the frequency of participation in international mobility.

Conclusions

1. It can be concluded that almost one half of participants (48.72%) of international training courses considered that they had enriched their English vocabulary by learning new words incidentally during various activities in non-formal adult education on topical issues of different subject fields.
2. According to the respondents' opinion the acquisition of new words during the training happened according to the following scheme: noticing an unknown word - retrieval of the word - using the word in the one's own speech" since 28.21% of respondents strongly agreed with this statement and 41.03% of them agreed with it.
3. Three factors influence the enrichment of English vocabulary during international training: (1) self-motivation of participants of international training courses, (2) encouraging learning environment and (3) self-directed learning skills of participants.
   3.1. The analysis of self-reflection of participants in the questionnaire showed that 38.46% respondents were motivated to improve the English language vocabulary during international courses.
   3.2. As regards encouraging learning environment, international training courses were organized as group work in 64.10% of cases, and 46.15% of respondents believed that group work in international courses was a very effective way to enrich English vocabulary. Furthermore, more than 72% of respondents answered that classrooms were arranged specifically for group work (e.g., chairs were arranged around the walls of a classroom or tables were placed in the middle with chairs around them).
   3.3. As regards self-directed learning skills of respondents, the results of the survey show that such techniques of finding the meanings of new words as asking a group member to explain the meaning of an unknown word in English (41%), looking for the meaning of the word in the electronic dictionary of the telephone during the lesson (23%) and writing down the unknown words and later looking at their translation (20.5%) were used.
4. The analysis of the answers of respondents revealing the most popular methods of noticing unknown words in the stream of speech show that 1) *guessing the meaning of the word from the context* and 2) *asking a group member for the explanation of the meaning* were the most frequently used methods.
5. Important contribution to the improvement of the English vocabulary during international training courses was made by social events such as joint events, excursions, etc. (in 58.97% cases, according to respondents' opinion).
6. It should be noted that this research was a case study which used self-assessment method and it reflects the views of the respondents who participated in it. Therefore the results cannot be generalized but only used to identify problems / directions of the topic.

Plagiarism Rate : 5.4%

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Challenges of Transforming Higher Mathematics to Remote Teaching and Learning due to Covid-19 Lockdown

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Abstract
Due to Covid-19, studies are provided remotely in all higher education institutions in Latvia. Despite the fact that e-learning has long been introduced as part of the mathematics study process, a number of challenges have emerged that limit full-fledged distance learning, as mathematics is one of the most complex academic disciplines, the study of which in digital form is a time-consuming and methodically complex process, the expansion of which is relevant. For this reason, the aim of the article (1) is to evaluate the learning experience in the COVID-19 lockdown situation, (2) to identify the problems encountered, (3) to highlight the most important didactic aspects of digital learning and the use of ICT. The empirical study includes an analysis of the results of interviews with university academic staff and student surveys on the experience of teaching and learning mathematics during the COVID-19 lockdown situation.
Keywords: Digital learning, e-learning, ICT, competence, learning outcomes, mathematics

Introduction

The rapid growth and spread of information and communication technologies (ICT) have led to significant changes in education, not only in terms of teaching practice, but also in terms of its organization, learning objectives and relevant content, teaching aids and the environment, and learning habits. Several educational studies show that the use of ICT in mathematics education promotes the acquisition of both mathematical competences and various other skills. ICT can be used as a dynamic tool for cognitive development, also for the acquisition of competences to ensure real-time learning, provide learners with tasks that correspond to their learning style, prior knowledge and cognitive skills as well as develop self-directed learning skills that are becoming increasingly important today.

The widespread use of ICT in education involves the organization of digital learning. In 2018 the European Commission has adopted the Communication on the Digital Education Action Plan. This document focuses on implementation and the need to stimulate, support and scale up purposeful use of digital and innovative education practices as well as outlines three main priorities:

1) Making better use of digital technology for teaching and learning;
2) Developing relevant digital competences and skills for the digital transformation and
3) Improving education through better data analysis and foresight.

Digital technologies refer to all electronic tools, systems, devices and resources that generate, store or process data, such as mobile phones, social media, online games, multimedia and more. Thus, digital learning is any type of learning that uses technology. It can be implemented at any time in all study programs, in any field of study. Particular attention is paid to the digital transformation of education at all levels of the education system in different countries. ICT combines both traditional computer technologies and modern digital communication technologies. Computer technology is usually understood as standard Office applications, while digital communication is the process of storing, receiving and exchanging electronic information. E-learning is one of the main positive aspects of ICT in education. E-learning eliminates the linear constraints of traditional curricula. The positive impact of ICT is also the acquisition of competences, such as critical thinking and collaboration (Leu et al., 2011). ICT offers learners' tasks that are better suited to individual needs, makes it easier to organize their own learning, which increases student responsibility for their own learning (Balanskat et al., 2006).

Several studies have been performed in the world on digital learning and ICT usage in mathematics education. Mathematics is one of the most complex academic disciplines, the study of which in digital form is a time-consuming and methodically complex process, the expansion of which is relevant. In Latvia, the course management system Moodle is an e-learning environment used by almost all higher education institutions. Moodle as an e-learning system is also used in mathematics studies at the Latvia University of Life Sciences and

Technologies (LLU). E-learning resources contain a storage of mathematics methodological e-materials which consist of materials created by mathematics department's teaching staff, materials available on-line. E-learning system is also used for so called non-educational activities such as communication among students and teacher, to record the marks and the results of tests on the internet, to see the changes in the schedule as well as for uploading students' homework, etc.

Currently, in all universities in Latvia, due to Covid-19, studies are provided remotely. Despite the fact that e-learning has been used as a part of the mathematics learning process for a long time, now, i.e., during the Covid-19 lockdown, a number of problems emerge that limit full-fledged distance learning. For that reason, the aim of the article is:

1) To evaluate the effectiveness of using various methods of digital learning in mathematics taking into account the experience of learning during COVID-19 lockdown situation;
2) To identify problems emerged;
3) To highlight the most relevant didactic aspects of digital learning and the use of ICT in order to promote competence building and providing continuity and availability of higher mathematics education.

Method

In order to gather mathematics teaching and learning experiences during COVID-19 lockdown situation, study of regulatory documents, scientific literature and other sources of information was performed. To develop a methodology for empirical research, the authors were inspired by the findings presented at the Fourth Congress of the European Society for Research in Mathematics Education, where three main themes were offered for the integration of tools and technologies in mathematics education: the relation between the use of technology and learning, the characteristics of technological tools which can foster the learning of mathematics, and the role of the teacher in technology-rich mathematics education (Barzel et al., 2005)**.**

Based on the above considerations, the problem has been approached by three dimensions:

1) Technological tools of learning mathematics at LLU - the description of the organization mathematics study process using ICT;
2) The use of technology and learnıng and
3) The role of the teacher in transforming of higher mathematics studies to remote teaching and learning.

Focused interviews with mathematics teaching staff on teaching experiences during COVID-19 lockdown situation and student surveys on mathematics learning experiences were carried out in the framework of this study. Two types of student surveys were conducted:

1) More than 300 students from Forest Faculty, Faculty of Food Technologies and Faculty of Information Technologies of LLU participated in the survey on their habits to use ICT in the mathematics study process;
2) Student survey on distance learning in LLU COVID-19 lockdown situation (N = 456). The questionnaire is available at: https://www.visidati.lv/aptauja/1576169292/.

Findings

The aim of LLU in the organization of the mathematics study process is to develop not only mathematics competences, but also communication, technical skills, teamwork, etc. abilities. The use of ICT in the mathematics study process includes learning and communication between teachers and students, virtual work groups and other participants of the study process, which are both remotely synchronized (takes place in real time) and non-synchronized (communication via e-mails, e-learning platform, social media discussion groups, etc.), thus making the study process better and easier (Vintere, 2012).

Technological tools of learning mathematics at LLU

Digital technologies are changing the way higher education is provided as these technologies offer a variety of learning management systems, providing both an individual and collaborative e-learning environment. Digital technologies also include online resources for teaching and learning mathematics, academic materials in electronic format, special mathematics-related software, social networking software, etc (Juan et al., 2012). An e-environment in Moodle has been created to support mathematics studies at LLU taking into account four components: content, process, learning outcomes as well as environment content, process, outcome and environment (evaluating prior knowledge in mathematics, students' individual learning styles, real-time learning, etc.):

1) An e-materials database was created, which included lecture presentations, summaries of each topic, descriptions of laboratory works, recommended tasks and examples of task solutions,
2) since the emphasis in maths studies is on solving specific problems, questions of a theoretical nature (evidence, understanding of formulas, possibilities of application of methods, etc.) are tested in the e-environment, which gives additional points in the final assessment,
3) a database of three levels of individual tasks has been created (different for each field of study of life sciences, engineering and social sciences), which in a random mode generates tasks to be solved individually for each student**.**

Mathematics study process provides not only contact lessons (lectures and practical work), but also individual work. The organization of the mathematics study program for engineering specialties at LLU includes laboratory works - the use of the software *MatLab* (formerly *MathCad*), to which 0.5 ECT per semester is awarded in the respective mathematics study programs. Students test the solutions to their individual problems with the *MatLab* software or *Excel* in laboratory works. They have to do homework solutions on the paper by showing the solution process step by step, but during the laboratory work it has to be done using *MatLab*. For teachers, this reduces homework time. In addition, students are offered small group counselling that could develop skills useful for new professionals such as communication and teamwork.

Getting acquainted with one of the mathematics software provides students with the skills to apply this software in future engineering studies and process modelling. However, it should be mentioned that *MatLab* is a commercial software that requires a license to use. Evaluating the software used in the mathematics studies, the conclusion could be made that commercially available software packages have become more user-friendly and are recommended software for mathematics studies, however, they are often not available to students for individual study at home.

This circumstance also affected mathematics studies during Covid-19 lockdown situation. For that reason, students took advantage of online programs. The survey results show that approximately 78.5% of Faculty of Food Technologies students (regularly -21.8%, often - 42.9%) and 52.5% of Forest Faculty students (regularly - 17.5%, often - 35.0%) use programs available on the Internet. The most popular mathematics software programs among the surveyed students are *Photomath*, *Symbolab* and *Integral Calculator*. Unfortunately, many mathematical software not only give results, but also show the solution step by step. Mathematics teachers believe that mathematical software should serve as a testing tool, not as information how to solve problem, because students often even don't understand what they have solved in homeworks.

The use of technology and learning

There are two main problems identified in educational research. First of all, it should be noted that most university students today have a high level of knowledge about mobile phones, smartphones, laptops and other devices, as well as skills to use social networking software such as Facebook, Twitter, WhatsApp, Instagram, YouTube, etc. (Khoza & Manik 2015). However, they don't use these technologies in learning mathematics content.

On the other hand, higher education institutions use hardware, software (such as application programmes, websites, and others, used in conjunction with hardware) as well as learning management systems, emails (Palmiter 1991), Virtual Manipulatives and White-board (Hwang et al. 2009) and others. A study by Prensky & Berry (2001) identified two types of knowledge generated by digital technologies: "future content" and "legacy content" knowledge. Students support "future content" knowledge, which is usually unstructured, electronically driven content. In turn, educators support "legacy content", which is structured content based on printed materials.

The digital technologies used in mathematics studies by students during Covid-19 were determined by the tools used by teachers. As seen in Table 1, different tools were used by teachers during distance learning. To drive mathematics content most often emails as well as university e-learning platform Moodle were used. To encourage and motivate students to study mathematics remotely, teachers also chose students' friendly tools that are not commonly used in mathematics studies at LLU like phone calls or *WhatsApp*. It should be noted that *Skype* and *Zoom* were used the least, which can be explained by the availability of *BigBlueButton* in Moodle, which provides online events for a large number of participants in real time.

Table 1. The use of different digital tools by teachers

Tools	All (%)	Majority (%)	Some (%)	Nobody (%)
Other	6	15	40	40
Phone calls	5	13	39	44
E-mails	47	37	15	1
WhatsApp	3	12	45	40
Skype	0	90	18	81
ZOOM	1	5	20	75
LLU e-learning platform	23	28	18	31

The use of ICT technologies at LLU is an integral part of the study process. In mathematics studies, ICT is used to independently learn the available informative and interactive e-materials, solve problems with *MatLab* software, find the necessary information, as well as get acquainted with mathematical software, collaborate online etc. The question is what the purposes of using the internet is and how students' habits of using ICT influence their study process. For that reason, more than 300 students from different faculties of the Latvia University of Life Sciences and Technologies were interviewed during the research on students' habits to use ICT in the study process of mathematics (Zeidmane, 2019, 2020). For comparison, research data is provided for the Faculty of Food Technology (FTF) in Table 2 and Forest Faculty (FF) in Table 3.

Table 2. Learning habits and frequency of use of e-learning tools of FFT students

Statement	Don't know (%)	Rarely (%)	Often (%)	Regularly (%)
Review lectures in e-environment	0	28.6	35.7	35.7
Additionally calculate tasks in e-environment	7.1	57.1	21.4	14.3
Learn from examples of solutions	0	14.8	7.1	78.8
Search for specific information on Internet	14.3	14.3	42.9	28.6
Use specific Math software	7.1	14.3	57.1	21.4

Table 3. Learning habits and frequency of use of e-learning tools of FF students

Statement	Don't know (%)	Rarely (%)	Often (%)	Regularly (%)
Review lectures in e-environment	9.0	32.5	37.5	25.0
Additionally calculate tasks in e-environment	7.5	45.0	32.5	15.0
Learn from examples of solutions	2.0	8.0	15.0	75.0
Search for specific information on Internet	0	35.0	27.5	37.5
Use specific Math software	7.5	40.0	35.0	17.5

The survey results show that the results in mathematics for students of the Faculty of Food Technology were significantly better than those of the Forest Faculty. Concerning the use of e-learning materials, about 71.4% of Faculty of Food Technology students (regularly - 35.7%, often - 35.7%) and only 62.5% of students from Forest Faculty (regularly - 25.0%, often - 35.5%) review lectures again in e-studies. More than 75% of students from both faculties prefer examples of problem solving rather than learning different problem solving methods. This is also evidenced by the fact that the students are reluctant to solve the additional tasks proposed in the e-studies;

students of Faculty of Food Technology: regularly - 14.3%, often - 21.4%, (mode = median = "partly"), Forest Faculty: regularly - 15.0%, often - 32.5%, (mode = median = "partly").

Analysing the students' habits of using Internet resources in the learning processs, it can be concluded that only 65% (often and regularly) of students from Forest Faculty search for specific information on the Internet. The students from Faculty of Food Technology take this opportunity more seriously - often and regularly 71.7%.

It should be noted, that the total majority of students have a habit to learn from examples of given solutions. Only about one third of respondents answered that they review lectures in e-environment.

Although the impact of gender on the results of the study was not studied, it should be noted that the science of forestry is studied mainly by men, but food sciences are studied mostly by girls.

The results of the survey show that students' habits to use ICT in mathematics studies have changed significantly during distance learning. As seen in Table 4, 75% of respondents always attended online lectures, 80% - always or often watched video lectures or read written materials to the end, as well as 81% of students completed the tasks and submitted them on time. Overall, more than 80% of students answered that during Covid-19 lockdown situation they performed study tasks independently and with a high sense of responsibility (Table 4), however, students' attitudes differed between faculties.

Table 4. Students' habits during distance learning

Statement	Always (%)	Often (%)	Sometimes (%)	Rarely (%)	Never (%)
I performed study tasks independently and with a high sense of responsibility	39	46	11	4	0
I used the electronic materials provided by the library	6	23	24	27	20
I completed the tasks and submitted them on time	51	30	14	4	1
I watched / read video lectures / written materials to the end	38	42	15	4	1
I attended online lectures	75	14	4	2	5

Based on interviews with mathematics teachers, it should be noted that with the onset of Covid-19 restrictions on studying in contact classes, lectures were organized using *BigBlueButton*, which were also recorded so that students had the opportunity to view the lecture several times at their own pace. Students had to learn the methods of solving mathematical problems independently by solving individual tasks, because there were no practical work classes. Of course, online consultations also were organized. This greatly increased the teacher's work as the teacher had to write comments to each student about the incorrectly submitted assignment. At the same time, many students did not use the given e-learning materials to solve the tasks, but mathematics programs. Unfortunately, many math software not only give results, but also show the solution step by step. Many students often did not understand what and how the result was calculated with the help of the program, so the solution was scrupulously asked for a detailed justification.

Based on above, the following problems were identified in the interviews with the academic staff encountered at the Forest Faculty and the Faculty of Information Technologies (FIT):

1) Students did not learn to study e-materials independently (Table 5, column 2) - homework started to be submitted only during the session;
2) Students also did not want to learn from the offered materials, but better used mathematics programs (based on information from the second column of Table 5), when they realized that it was also necessary to understand, then reluctantly (as shown by the fact that many individual homework corrections had to be submitted three and four times) began to study materials and ask questions in consultations;
3) The same problems were identified during the final exam. Therefore, after each exam, online discussions were organized about the progress of solving the task. Unfortunately, for quite a number of students, the mark for the submitted final exam work was significantly reduced.

4) Some students 'recovered' too late and could not do their homework or gave up to do it at all.

Table 5. Behaviour of FIT and FF students during distance learning

	Homework was submitted and credited during the semester and an exam was taken (%)	Homework was submitted and credited only during the session and there were additional exams (%)	Did not deal with individual homework and did not pass the exam (%)
FIT - group 1 - DVDZ	51.3	24.3	24.3
FIT - group 2 - ITIA	76.9	11.6	11.5
FF - MZ	39.3	53.6	7.1

As it is known, mathematics is a language of symbols. As specific character of mathematics are long chains of logic conclusions with huge didactic units of learning material. Therefore, mathematics as one of the basic subject have both direct (mathematics serves as a tool for solving and calculating various problems) and indirect impact on the development of learning outcomes. Students who participated in the survey were asked to evaluate the indirect effects of mathematics on the development of different skills. Results are summarised in the Table 6.

Table 6. Survey results on mathematics indirect impact

	I would like to get these skills, doing nothing (%)	I have partially mastered these skills at school and believe that there is no need to further develop the skills (%)	I am ready to invest the minimum effort to just get the minimum positive evaluation (%)	I am ready to invest the necessary effort to obtain these skills at the highest possible level (%)
1. Move to the formal language, using mathematical symbols	9.1	18.2	19.1	53.6
2. Create a series of logical conclusion, using the formal language	1.8	32.7	17.3	48.2
3 Split large amounts of information in separate parts	7.3	40.9	23.6	28.2
4 Find the necessary solution method by selecting from a large number of methods	13.6	23.6	32.7	30.0
5 Use formal rules of mathematics in real situations	10.0	23.6	19.1	47.3
6 Use software for mathematical calculations	9.1	20.0	19.1	51.8

Several conclusions emerge from the interpretation of these results in relation to mathematics remote studies due to Covid-19:

1) The positive thing is that students learn to learn independently (although from materials prepared by the teacher in e-studies);
2) The downside is that it takes extra effort and many students are not ready to do it on the pretext that they do not understand. They often do not even try to listen to explanations in online consultations;
3) As students have an access to step-by-step mathematical software available on the Internet, students develop only the skill to use software for mathematical calculations by performing individual homework, often without even understanding how the task was solved;
4) If the test of knowledge were face-to-face, then students would be more motivated to understand the software solution, because they will have to be able to find the right solution method (skills to find the necessary solution method by selecting from a large number of methods) and be able to solve

(skills to create a series of logical conclusion, using the formal language, split large amounts of information in separate parts and skills to use formal rules of mathematics in real situations);

5) Since the knowledge test took place online, after the problem solutions were submitted, individual discussions were organized, as a result of which it was established whether the student has understood the solution and is able to explain the solution (skills to create a series of logical conclusion, using the formal language) using mathematical rules (skills to split large amounts of information in separate parts and also use formal rules of mathematics in real situations). The results were not particularly "brilliant". The results of mathematics studies of students from the Faculty of Information Technologies and the Forest Faculty during the Covid-19 lockdown situation are summarized in Table 7.

Table 7. The results of mathematics studies during the Covid-19 lockdown situation

	Failed (%)	4 (%)	5 (%)	6 (%)	7 (%)	8 (%)	9 (%)	10 (%)
FIT - group 1 -	26.5	17.6	26.5	11.8	2.9	8.8	5.9	0
FIT - group 2 - ITIA	11.5	3.8	15.4	23.1	26.9	7.7	7.7	3.8
FF - MZ	7.1	14.3	14.3	10.7	10.7	7.1	3.6	3.6

The role of the teacher in transforming of higher mathematics studies to remote teaching and learning

Different educational studies show the role of the teacher in usage of various technological tools and their use in the classroom (Kendal et al., 2004; Vintere, 2009, 2012; Zeidmane, 2020; Vladescu, 2016, 2017; etc.) which includes: (1) the development of different ways of organizing teaching and learning activities and different approaches to learning with technological tools and (2) the necessity to manage the option of having several solutions for a chosen problem, and several ways of using technology.

In order to transform distance learning, existing conditions are changing and teachers need to change the way they teach. This poses challenges for teachers, thus pushing them out of the existing comfort zone. Teaching in a very fast time had to be reoriented only remotely, but referring to the above, the developed e-learning system was only part of the learning process, where the focus was mainly on reading the materials and also on the so-called non-educational support functions. In a very short time, teachers had to acquire skills to conduct classes (lectures, consultations, discussions, etc.) online, prepare these classes and create the relevant methodological materials. Organizing the exam also required a lot of time for the teacher because many variants of the task had to be prepared, as well as individual discussions with each student after the exam on the tasks solutions. It should be noted that new situation required not only a lot of time from teachers but also new competences: ability to solve still unknown problems, working in a teams, creativeness, flexibility, critical thinking, etc.

Recording of lectures and organizing online consultations or discussions in the e-environment was practiced at LLU using *BigBlueButton*, so the students had the opportunity to view the lecture or study other online materials several times at their own pace. Students were positive about this opportunity. However, the question arises as to whether students need to attend contact lectures. This example shows that the function of lectures could be consultative rather than informative.

Although several researches document the effectiveness of the usage of information and communication technologies in mathematics education to help students learn difficult concepts, most of teachers taught mathematics as a set of facts, put more emphasis on the process of driving of mathematics content and less on the necessity of the content. As the result, mathematics appeared abstract to students. Scientific concepts were not taught in ways that were relevant to students' lives. Therefore, including mathematics practical application in real life was the challenge encountered during Covid-19.

Results, Conclusions and Recommendations

The results of the survey carried out within this study show that the main challenges identified by students during the distance learning are: it took more time to acquire knowledge than before (70%), difficulties to motivate oneselve to work and complete the tasks in time (62%), volume of study work (62%), communication with teachers (39%), availability of appropriate hardware / smart devices / software at home (18%), digital skills to use distance learning platforms offered by teachers (6%), etc.

Challenges for teachers come from the mathematics study process organisation at LLU which faces two major problems at LLU. First, students do not apply directly the problem solving skills of higher math. Second, studying higher math, students get an insufficient idea of its usability. It means that it is necessary to include the use of math in the study process. The challenge is also to find the way how to organize the self-directed study of math practical application based on math didactic approach and e-learning features. It is also necessary to work out frameworks for organization of general and practical problem solving in mathematics on the basis of didactic ontology. Moodle computerized learning system, which is one of the main teaching tools at LLU, was chosen as a practical example for self-directed study organization. Moodle has two main tools for problem solution mentioned before: the glossary auto-linking filter and the lesson module. The combination of these tools could improve usability of mathematics in specific subjects and students' knowledge about math operations in the field of their academic study. The challenge is to develop these options at LLU. The areas that LLU hopes to be developed in the future are problem-based and project oriented mathematics teaching and learning. Mathematics teachers at LLU believe that a better understanding of how students learn mathematics coupled with effective application of mathematics e-learning can enhance meaningful learning of math and make the subject more exciting. Therefore, it is necessary to introduce a mathematics e-learning model suitable for the modern digital era based on the modern learning theories as well as implement the model on an e-learning platform.

Some conclusion from the reviewing of scientific literature and the results of this empirical study as well as taking into consideration the authors' reflective experience:

1) Teaching the same topic in quite different technological environments gives rise to different learning processes and conceptions. Of course, the use of ICT substantially helps with driving math content in a more modern and vivid way;
2) Transforming maths studies to remote teaching/learning process is in line with the basic didactical principles such as visualization, systemization, links between theory and practice, knowledge consolidation, encouragement of student participation in different activities (collaboration & cooperation), individualization and differentiation of teaching etc.;
3) To transform higher mathematics studies to remote teaching and learning, it is necessary to provide instruments to analyse teaching practices and organize teacher training by providing specific support;
4) Teachers are, on an individual basis, free to innovate within their own classrooms. However, no teacher exists in isolation. Transforming studies to remote teaching and learning is an issue for the entire educational institution. Working in teams is required;
5) Based on the experience of mathematics teachers, when distance learning had to be provided in a very short time, for which the teachers were not ready, it could be suggested to develop digital learning strategy for mathematics and harness the potential of modern technology, develop and implement science-based didactical framework for scaling up digital learning and usage ICT in mathematics education, provide methodological and technical support to improve the distance learning process and ensure accessibility and continuity of mathematics education as well as improve the solutions for online collaboration, etc.

Plagiarism Rate = 12.6%

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Increasing The Service Quality of Universities for Sustainability of Education

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Abstract
Higher education is one of the fastest-growing service industry on the globe and the service quality of the universities have to be increased to meet the needs of current and future students. One of the most important services provided to the students is housing. This study aimed to develop "a Dormitory Service Quality Evaluation Scale" which can be used by the dormitory management for internal self-evaluation and also by ministry inspectors for external evaluation to determine current service quality of the dormitories and also to measure the satisfaction level of the students about the quality of services provided by the dormitories. A 5-point Likert-type scale was developed and applied to 243 university students The scale fits the multivariate normal distribution, the chi-square value of the Barlett test was 9331.03 ($p < 0.05$) and the KMO coefficient was 0.905. There are 8 factors with an eigenvalue greater than 1 explaining 72,164% of the total variance of the scale. Scale χ^2/sd value was 1,868 and it was found that the scale has a perfect fit and has acceptable goodness of fit due to the values NFI=0,905, CFI=0,927 ve GFI=0,904. The alpha coefficient is 0.951 and the coefficients for the sub-factors in the scale ranged from 0.770 to 0.963. In this research, a reliable and valid scale was developed so that dormitory administration can use this scale to identify their strengths, shortcomings, and weaknesses within the framework of the services they provide to the students. Dormitories can take corrective actions to eliminate their weaknesses and maintain their strengths. In this way, the quality of the services provided to the students by dormitories can be improved and the dormitories can work more efficiently and actively.
Keywords: Dormitory, Service Quality, Sustainability, University Students, Total Quality Management

Introduction

Higher education is one of the fastest-growing service industry on the globe. Today an enormous number of students, from almost every country, travel abroad to get quality higher education and quality educational services. Universities need appropriate methods and strategies to meet the needs of their current students (Hussain and Birol, 2011) for the sustainability of the education..The fact that higher education provides advantages for young people to provide job opportunities and to live in better life conditions increases the demand for the university(Lamanauskas et al., 2012).One of the most important services provided to the students is housing.Housing is an important element that determines the quality and quantity of social life and affects personal, social and psychological development. However, housing is highly related to health and nutrition factors (Kara, 2009). One of the biggest problems of the young person who has reached the age of higher education and has won a university outside the city where he lives in is the accommodation problem(Broton ve Goldrick-Rab, 2013).Accommodation conditions should be known and developed within the scope of education sustainability (Arlı, 2013). Dormitories are places where students find a living environment to make the best use of their free time, meet their study needs, provide their physical, mental and cultural development and meet their personal needs (Güldiken and Özekicioğlu, 2004). Dormitories aim to create peaceful and safe housing to students in accordance with today's requirements and also to create an environment that will provide social and cultural development of students (Yavuzer et al., 2005; Arlı, 2013; Öztürk, 2014). Students are looking for a peaceful and safe housing for a successful educational career. They stay in public and private dormitories, rented houses, private pensions, relatives' houses, student houses or apart-hotels.Socio-economic conditions of the families (Filiz and Çemrek, 2007; Özdemir and Yaman, 2007), physical facilities of the dormitories, economic opportunities provided, and socio-cultural opportunities (Ayaz and Başdağ, 2016), proximity to the university, easy transportation, security, the possibility of studying (Düzen, 2009; Gündoğdu, 2014) play important role in the selection of accommodation places.

The higher education sector in North Cyprus has undergone enormous growth in recent years. Currently, there are 103,748 students, 12,243 are TRNC citizens, 50,286 from Turkey and 41,219 from different countries, studying at 22 universities in North Cyprus. There are 87 dormitories: 19 in Güzelyurt, 2 in Lefke, 29 in Nicosia, 15 in Kyrenia, 2 in Gönyeli, 20 in Famagusta in North Cyprus. Dormitories in TRNC are inspected by ministry experts, ministerial inspectors, ministry of health and related municipalities, if deemed necessary by the Education Common Services Department (Higher Education Dormitory Regulation, 2011). Five of the dormitories give service to the students from Turkey and these dormitories are under the control of the Turkish Republic General Directorate of Credit and Dormitories of the Ministry of Youth and Sports. These dormitories are in Lefke,Güzelyurt and Gazimağusa cities. The purpose of the Turkish Republic General Directorate of Credit and Dormitories of the Ministry of Youth and Sports is to make dormitories for the students studying at home and abroad and to provide them to operate, to provide nutritional aid, to contribute to their national and spiritual development through educational, social, cultural and sporting activities, to give credit or scholarship to higher education students, and to facilitate the higher education of the students. Social, cultural and sports activities are organized in order to evaluate the free time of the students staying in the dormitories in order to make the best use of their free time outside their classes, to ensure their physical, mental and cultural development, and to develop friendship, brotherhood and friendship among them, and competitions and tournaments are organized in provinces and abroad. In addition, preventive mental health services are provided to the students in psychosocial services, and adaptation programs are organized in order to adapt to newly enrolled students (Yurtkur, 2019). The effective factors of student housing choice in North Cyprus universities are proximity, cost, rules and regulations, peace, and privacy, followed by maintenance, room arrangement, ventilation, internet access, communication, reading section, empathy, culture, common lounge, kitchen and social class (Tümer et al.,2019).

Objectives

The aim of this study is to develop a “Dormitory Service Quality Evaluation Scale” which can be used by the dormitory management for internal self-evaluation and also by ministry inspectors for external evaluation to determine current service quality of the dormitories and also to measure the satisfaction level of the students about the quality of services provided by the dormitories.

Methodology

Participants

The research population constitutes university students accommodating in dormitories in the Turkish Republic of Northern Cyprus (TRNC). It is difficult to reach the entire population because of factors like time, cost and control. 5 dormitories are in Lefke, Güzelyurt and Gazimağusa and they are under the control of Turkish Republic General Directorate of Credit and Dormitories of the Ministry of Youth and Sports. The scale was applied to 243 university students accommodating in these dormitories by using Purposeful sampling technique in the 2019-2020 academic year.

Development of the Dormitory Service Quality Evaluation Scale

As the first stage, National and international literature on the topic,the models measuring the quality of service (Servqual, Servperf, Groonroos, Critical Events); TR and TRNC Higher Education Dormitory Regulations were examined.

As the second stage, in order to determine the expectations of university students about the services provided by the dormitories, 50 university students were asked to write an essay to answer the question “What are the elements that show the quality of the services provided in dormitories?”.

As a result of the evaluation of the literature, models of service quality and qualitative study, a draft scale consisting of 75 propositions was created. Scale items were prepared in 5 Likert-type responses (as very good-good-acceptable- poor- very poor).

As the third stage, in order to ensure the content validity of the scale, a pool of items and an expert opinion form were provided to three field experts and one assessment and evaluation specialist.

As the fourth stage, the evaluation of the scale items according to grammatical rules, clarity and similar factors was done by two Turkish teachers.

As the fifth stage, the pilot studywas performed with randomly selected 25 university students housed in the dormitories in TRNC. This pilot test was performed by the researchers in person to determine whether there were unclear items, directives were understood, application duration is sufficient. Necessary changes were made on the scale by taking opinions of the experts and pilot test.

Data Analysis

SPSS 21 and AMOS 21 were used to analyze the data.Exploratory factor analysis and confirmatory factor analysis were used to determine the validity structure of the scale.The reliability of the scale was tested by using Cronbach alpha test and half-split method. Also item-total correlation was examined.

Results

1. Exploratory Factor Analysis

First, exploratory factor analysis (AFA) was used to reveal the factor structure of the Dormitory Service Quality Assessment Scale. Exploratory factor analysis is used to determine whether the theoretical relations between the variables that will emerge from the observed measurements or the concepts assumed to be measured by the items in the scales consisting of a series of items are actually able to measure this structure or concept, and most importantly, determining the independent factors that make up this structure (Büyüköztürk, 2012). Before the exploratory factor analysis, the normality test, Barlett's sphericity test was applied to examine whether the scale was factorizable and the Kaiser-Meyer-Olkin (KMO) coefficient was examined. The KMO coefficient gives information about whether the data matrix is suitable for factor analysis and the suitability of the data structure for factor extraction.

KMO is expected to be higher than 0.60 for factorizability. The Barlett test examines whether there is a relationship between the variables on the basis of partial correlations or not(Büyüköztürk, 2009).It was observed that the data regarding the Dormitory Service Quality Evaluation Scale fit the multivariate normal distribution, the chi-square value of the Barlett test was 9331.03 ($p < 0.05$) and the KMO coefficient was 0.905.Accordingly, it was determined that exploratory factor analysis can be applied to the Dormitory Service Quality Evaluation Scale.While the Exploratory factor analysis was applied to the draft form of the Dormitory Service Quality Evaluation Scale, the principal components analysis method was used and the varimax transformation was applied to the data. In determining the factor structure of the scale, a scree plot was examined and factors with an eigenvalue greater than 1 were considered. In order to ensure that the distinction between the factors is good, factor loads below 0.5 were removed from the scale and factor analysis was repeated.Accordingly, 31 items from the 75-item draft scale were discarded and the results of exploratory factor analysis for the 43-item form are shown below.

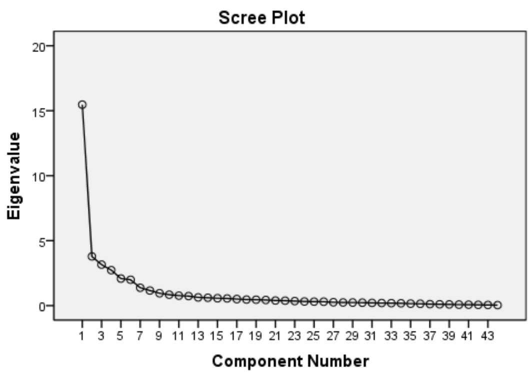

Fig. 1. ScreePlot Analysis

The refraction in the ScreePlot graph shown in Figure 1 indicates that the scale has an 8-factor structure.

Table 1. Explanatory factor analysis results of the dormitory service quality evaluation scale

Factor	Eigenvalues			Total of Rotated Squares		
	Eigenvalues	Explained variance	Cumulative Variance (%)	Eigenvalues	Explained variance	Cumulative Variance (%)
Factor1	15,465	35,148	35,148	7,564	17,190	17,190
Factor2	3,785	8,602	43,751	4,998	11,359	28,549
Factor3	3,153	7,167	50,918	4,576	10,400	38,949
Factor4	2,733	6,212	57,129	4,002	9,095	48,044
Factor 5	2,085	4,739	61,868	2,969	6,747	54,791
Factor 6	1,993	4,529	66,397	2,779	6,315	61,106
Factor 7	1,378	3,131	69,528	2,755	6,261	67,367
Factor 8	1,160	2,636	72,164	2,111	4,797	72,164

According to Table 1, it has been determined that there are 8 factors with an eigenvalue greater than 1 in the Dormitory Service Quality Assessment Scale and 8 factors explain 72,164% of the total variance of the scale.

The explained variance over 1 is obtained by divison of the sum of the meaningful eigenvalues by the total number of items, and the percentage is taken. It is important that the explained variance is over 50% (Yaşlıoğlu, 2017). Accordingly, the explained variance related to the structure of the Dormitory Service Quality Evaluation Scale with 8 factors is extremely high.

Table 2. Rotated factor matrix for dormitory service quality evaluation scale factor loads

	F1	F2	F3	F4	F5	F6	F7	F8
Artistic activities are qualitatively sufficient	0,87							
The number of artistic activities is sufficient	0,85							
Cultural activities are qualitatively sufficient	0,85							
Seminars are qualitatively sufficient	0,84							
Cultural activities are sufficient in numbers	0,82							
The number of seminars is sufficient	0,80							
The number of sportive activities is sufficient	0,79							
Sports activities are qualitatively sufficient	0,76							
Psycho-social support is sufficient	0,74							
The orientation program is sufficient	0,65							
All the staff about their service has sufficient knowledge and skills		0,78						
All staff are willing to serve on time		0,77						
I can reach all dormitory staff at any time		0,77						
Problems I complain are solved in a short time		0,72						
I am pleased with the attention, attitude, and behavior of the staff on duty		0,71						
Complaints are taken into consideration in the dormitory		0,71						
İnterest and attitude of managers are appropriate		0,68						
Hygiene is good in cafeterias			0,86					
Dining hall area is sufficient			0,84					
Cafeteria area is sufficient			0,81					
Foods are cheap enough in cafeterias and dining halls			0,78					
Healthy foods are served in dining halls			0,74					
Healthy foods are served in cafeterias			0,62					
Number of laundries are sufficient				0,82				
Visitor lounge is suitable in terms of equipment				0,80				
The lobby area is sufficient				0,70				
Study areas are sufficient				0,62				
Social spaces are sufficient				0,57				
Luggage storage rooms are sufficient				0,55				
Sound insulation of my room is good					0,70			
My room space is enough for me					0,68			
My room is clean					0,63			

The decoration of my room meets my requirements	0,62			
Internet access in my room is sufficient	0,53			
The hot-cold water system is sufficient		0,91		
The shower / bath in the dormitory is sufficient in number		0,90		
WCs in the dormitory are sufficient in number		0,89		
My life and property safety is sufficiently ensured			0,92	
Disciplinary rules are followed			0,87	
Precautions against fire are sufficient			0,86	
Access to rooms is easy for students with disabilities				0,71
There is a lift for disabled students				0,67
There are ramps for disabled students				0,57

When we examine rotated factor matrix for Dormitory Service Quality Evaluation Scale factor loads, there are: 10 items with factor loads between 0,65-0,87 in factor 1; 7 items with factor loads between 0,62-0,77 in factor 2; 6 items with factor loads between 0,62-0,89 in factor 3; 6 items with factor loads between 0,55-0,82 in factor 4; 5 items with factor loads between 0,53-0,70 in factor 5; 3 items with factor loads between 0,89-0,91 in factor 6; 3 items with factor loads between 0,86-0,92 in factor 7 and 3 items with factor loads between 0,57-0,71 in factor 8.

2. Confirmatory Factor Analysis

Confirmatory factor analysis was applied to determine the suitability of the factors determined. DFA is used to determine whether variable groups contributing to the detected factors are adequately represented by these factors (Aytaç ve Öngen, 2012).

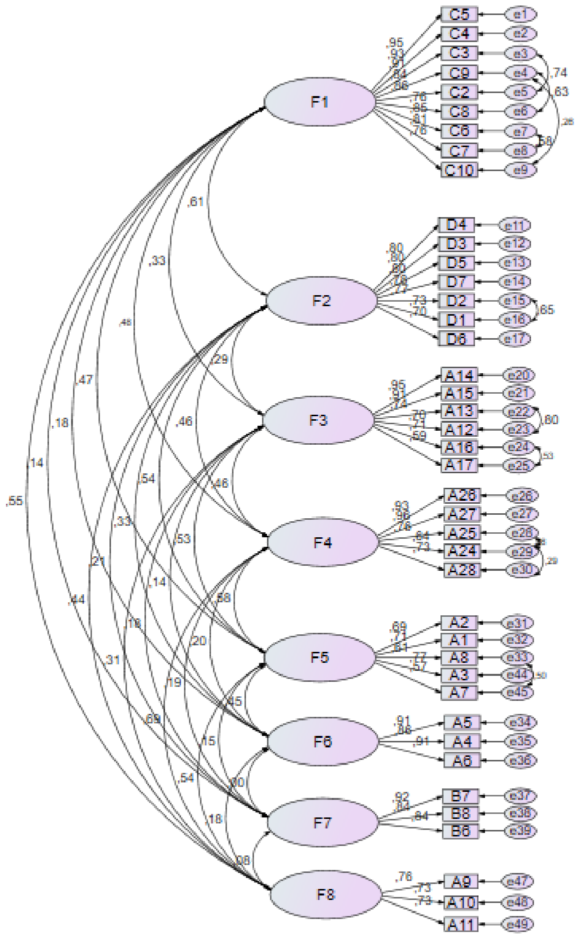

Figure 2. Confirmatory factor analysis pathdiagram of dormitory service quality evaluation scale

Table 3. Dormitory service quality evaluation scale DFA goodness of fit values (first model)

The Goodness of Fit Indices	Calculated value	Fitness
χ^2/sd	1,868	Excellent
RMSEA	0,060	Acceptable
NFI	0,905	Acceptable
CFI	0,927	Acceptable
GFI	0,904	Acceptable
AGFI	0,891	Bad fit

When Table 3. is examined, it was seen that the Dormitory Service Quality Evaluation Scale χ^2/sd value was 1,868 and it was found that the scale has a perfect fit in terms of χ^2 / sd. χ^2/sd value below 3 indicates a perfect fit (Klein,2005).The average square root of approximate errors below 0,80 shows an acceptable fit (Brown, 2006). The scale is acceptable because RMSEA value is 0,060. A scale has an acceptable fit if its NFI, CFI ve GFI values are between 0,90-0,95 (Tabachnick ve Fidell, 2001). Dormitory Service Quality Evaluation Scale has acceptable goodness of fit due to the values NFI=0,905, CFI=0,927 ve GFI=0,904.

In line with the above results, the goodness of fit indexes of the 41-item Dormitory Service Quality Assessment is good, and as a result of the confirmatory factor analysis applied, the number of items decreased to 9 by deleting 1 item from the factor1 and the number of items decreased to 5 by deleting 1 item from the factor4. As a result factor 1 has 9 items, factor 2 has 7 items, factor 3 has 6 items, factor 4 has 5 items, factor 5 has 5 items, factor 6 has 3 items, factor 7 has 3 items and factor 8 has 3 items.

3. Reliability of Dormitory Service Quality Assessment Scale

For reliability analysis of the Dormitory Service Quality Evaluation Scale, Cronbach's alpha test and split-half test and item-total correlations were examined. The findings obtained are represented in Table 4 below.

When the Cronbach alpha test results shown in Table 4 are examined, it is seen that the alpha coefficient belonging to the Dormitory Service Quality Assessment Scale is 0.951 and the coefficients for the sub-factors in the scale ranged from 0.770 to 0.963. Cronbach alpha coefficient greater than 0.70 indicates that scale is reliable (Büyüköztürk, 2009).Accordingly, the Dormitory Service Quality Evaluation Scale was found to be internally consistent and reliable in terms of Cronbach alpha test.

When the split-half test results were examined, it was found that the alpha coefficient of the first half of the 41-item scale consisting of 21 items was 0.919, the alpha coefficient of the second half of the 20-item was 0.933, and the correlation coefficient between the halves (r = 0.639) was found to be positive and strong.

In addition, it was determined that the item-total correlations of all items in the Dormitory Service Quality Evaluation Scale were significant ($p < 0.05$) and the lowest correlation coefficient was 0.281 while the highest correlation coefficient was 0.735.

Table 4. Reliability analysis results of dormitory service quality evaluation scale

	Value
Dormitory Service Quality Assessment Scale Overall	0,951
Factor 1	0,963
Factor 2	0,904
Factor 3	0,913
Factor 4	0,913
Factor 5	0,816
Factor 6	0,922
Factor 7	0,770
Factor 8	0,780

Cronbach alfa	I. Part	Coefficient	0,919
		Number of items	21
	II. Part	Coefficient	0,933
		Number of items	20
Correlation between parts			0,639
Spearman-Brown Coefficient			0,780
Guttmansplit-half Coefficient			0,780

As a result of the validity and reliability study detailed above, it has been determined that the Dormitory Service Quality Evaluation Scale is a valid and reliable measuring tool.

Conclusion

Dormitories, where university students accommodate are one of the most important factors that affect their educational success. Students expect quality services that can meet their basic needs such as nutrition, study, security, and socialization. This subject also has an important effect on the university's preference due to students' adaptation to the city and country where the universities are located. Students leave the dormitories that cannot meet their basic needs and start living in homes, or leave that city, country or university and go to another university. In this context, it is important to get information about student satisfaction by evaluating the service quality of the dormitories.

This research aimed to develop a "Dormitory Service Quality Evaluation Scale" which can be used by the dormitory management for internal self-evaluation and also by ministry inspectors for external evaluation to determine current service quality of the dormitories and also to measure the satisfaction level of the students about the quality of services provided by the dormitories.In this research, a descriptive research method was used. The 5-point Likert-type scale, which contains 75 propositions, was obtained by considering national and international literature on the subject, the models measuring the quality of service, TRNC Higher Education Dormitory Regulation, compositions written by 50 university students expert opinions and pilot application. The scale was applied to 243 university students in the dormitories in the spring term of 2019-2020 academic year by using a random sampling method. The scale fits the multivariate normal distribution, the chi-square value of the Barlett test was 9331.03 ($p < 0.05$) and the KMO coefficient was 0.905.Thereare 8 factors with an eigenvalue greater than 1 explaining 72,164% of the total variance of the scale.Scale χ^2/sd value was 1,868 and it was found that the scale has a perfect fit and has acceptable goodness of fit due to the values NFI=0,905, CFI=0,927 ve GFI=0,904.The alpha coefficient is 0.951 and the coefficients for the sub-factors in the scale ranged from 0.770 to 0.963. The alpha coefficient of the first half of the 41-item scale consisting of 21 items was 0.919, the alpha coefficient of the second half of the 20-item was 0.933, and the correlation coefficient between the halves ($r = 0.639$) was found to be positive and strong.Theitem-total correlations of all items in the scale were significant ($p < 0.05$) and the lowest correlation coefficient was 0.281 and the highest correlation coefficient was 0.735.Ithas been determined that the Dormitory Service Quality Evaluation Scale having 8 factors and 41 items is a valid and reliable measurement tool.

Discussion and Suggestions

When literature about services of dormitories and housing problems of university students is scanned, there are many studies done on this issue in Turkey such as (Güllü and Kuşderci ,2011; Arlı, 2013; Kavuncu, 2014; Akpınar, 2014; Ok and Girgin, 2015; Karabacak and Sayılı, 2016; Yıldırım, 2016). According to Tumer et al. (2019), there is a growing number of students coming to North Cyprus for the purpose of education but there has been no qualitative or quantitative study done for the evaluation of the student-housing situations. There is a need for a study to evaluate the current student-housing situation, to ensure feedback which can be used to improve student housing situations and make changes to future housing.

That's why there is a need for a study to develop a dormitory service quality evaluation scale that can be used in the process of continuous development and self-evaluation. In this research, a reliable and valid scale was developed so that dormitory administration can use this scale to identify their strengths, shortcomings, and weaknesses within the framework of the services they provide to the students. Dormitories can take corrective actions to eliminate their weaknesses and maintain their strengths. In this way, the quality of the services provided to the students by dormitories can be improved and the dormitories can work more efficiently and actively. Also, all external inspectors can use this scale to evaluate the service quality of the dormitories.

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The Effect of Perceived Academic Stress on Academic Self-efficacy in University Students

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Abstract
The aim of the study is to analyse the correlations between academic self-efficacy and academic stress. Self-efficacy is the key construct in various domains of human activity and represents the individuals' beliefs about their abilities to cope with difficult life demands and to attain the intended results. Conversely, academic stress acts on the other side of the spectrum, and mostly has a negative effect on students' academic achievement. The sample consisted of 206 university students including. The data were collected using the Academic Self-efficacy Scale (ASE) and the Academic Stress Inventory (ASI). The results showed a number of significant relationships of strong effect (r = -0.572). According to the subsequent linear regression models, academic self-efficacy affected the following stress domains: study demands (32.4-33.6% of explained variance), followed by organizational-social aspects of study (11.9%), and work-life balance stress (9.2%).Besides the ASE total score, the effect of other subscales was particularly evident.
Keywords: Academic stress, academic self-efficacy, university student, Czech Republic

Introduction

The issue of academic stress is not always defined in a uniform way. Wilks (2008) defines academic stress as a result of a combination of academic requirements that often exceed the adaptive capabilities of an individual. By contrast, Provenzano (in Wilks, 2008) understands academic stress (in relation to university students) as stress caused by any source (family, work). Kumar and Jejurkar (2005 in Matoušek, 2018) define four areas/factors that have the greatest impact on perceived stress among university students (academic, physical, social, and emotional). To summarize the definitions above (the list of which is not exhaustive), it may be postulated that in the course of their study, probably every student has been exposed to situations or stressors that initiate academic stress. The most common sources of academic stressors include: pressure on performance (from the teacher or parents), perception of workload, self-perception, time constraints, and in some cases lack of money (Matoušek, 2018; Misra, McKean, West, 2000; Reddy, Menon, Thattil, 2018). It turns out that the degree and effect of academic stressors probably differ in relation to the type of faculty. Another research study is that by Matoušek (2018), who concluded that students of humanities and social sciences were influenced by stress in their behaviour and feelings more than students of natural sciences. It should be noted that in some situations stress may be desirable but must be adequate and acceptable. If students are not exposed to any stress, this does not necessarily mean higher academic performance. On the contrary, it may happen that some tasks or responsibilities will not become a challenge but rather boring activities. This means that a certain level of stress is appropriate or even desirable for students' optimum performance (Reddy et al., 2018). Every individual is affected by stress situations in a different way. If a student has difficulty coping with stress in an effective way, this may have serious consequences for their mental, social, and emotional health. Wilks (2008) emphasised that similar problems might affect students' academic performance in terms of lower academic performance. This might impair cognitive functioning and the ability to learn and cause sleep disorders, loss of appetite, burnout syndrome, or termination of study (Matoušek, 2018; Reddy et al., 2018). In this context, interesting conclusions were suggested by Misra et al. (2000), who focused on the perception of academic stress by university students in relation to gender and year of study. At the same time, they compared stress perception among faculty employees and students. The authors concluded that male students (and teachers) were more resistant to stress situations than female students (and teachers). They assumed that this difference could be caused for example by the fact that men are often faced with the belief that showing emotions (for example crying) is a sign of weakness or femininity. As regards the relationship between age and stress, it was confirmed that students in the first year were more susceptible to stress situations. At the same time the authors emphasised the importance of maintaining and developing mutual communication in schools (Misra et al., 2000). Kopuničová, Orosová, Šebeňa, Benka and Gajdošová (2011) stated that there were a number of ways to effectively relieve tensions, such as therapy, stress management drills, or managerial skills training. This implies that students can use various constructive approaches (including dysfunctional ones such as substance abuse) to cope with academic stress. According to some authors, these approaches often include searching for spiritual (religious) or social support, effective time management, or active involvement in various leisure activities (Misra et al., 2000; Misra, McKean, 2000). In this respect, leisure activities are of special importance (for example sports), especially if they provide a feeling of fulfilment. If this constructive stress elimination fails, then for example Kopuničová et al. (2011) confirms the negative impact of stress on self-efficacy.

The term self-efficacy is often associated with Albert Bandura’s theory. In a simplified way, self-efficacy refers to an individual’s confidence in their ability to organize and execute a given course of action to solve a problem or accomplish a task (Eccles, Wigfield, 2002). In Bandura’s conceptualization, self-efficacy is a mechanism that explains and predicts thoughts, emotions, and actions of a person and organizes and takes gradual steps towards the set goals. Interestingly, this concept is less related to what real skills and abilities individuals have, but the more important is what they believe they can achieve with the skills and abilities that they may have. Self-efficacy thus serves a self-regulatory function by giving individuals the ability to influence their own cognitive processes and actions, thereby changing their environment (Bandura, 1994; 1995; 2001; Maddux, 2012). People with high confidence in their abilities address difficult tasks as challenges that need to be resolved rather than threats that should be avoided. Such personal setting supports true interest, deep immersion in activities, and efforts to achieve goals and maintain full commitment to them. A possible failure is attributed to insufficient effort or insufficient knowledge and skills that are attainable. This leads to personal success while stress and vulnerability to depression are decreased (Wolter, Hannover, 2016*)*. On the contrary, people who doubt their abilities avoid difficult tasks because they appear to them as personal threats. They have low aspirations and weak commitment to the goals they have chosen to pursue. When faced with difficult tasks, they tend to give up quickly (Schwarzer, 1992; Schwarzer, Jerusalem, 1995). Undoubtedly, in the university environment self-efficacy is the fundamental factor that affects students’ achievement, whether because self-efficacy refers to an individual’s belief (conviction) in attaining the desired level of achievement of a task or academic goal, or because it affects the choice (decision) that students make and the ways they make these choices (Bandura, 2004; Eccles, Wigfield, 2002; Schunk, Pajares, 2002). Furthermore, it turns out that academic self-efficacy may vary depending on task difficulty; some students may believe that they are more efficacious in more difficult tasks, while others in simpler tasks. Moreover, self-efficacy is considered to be situation-based rather than a personality trait (Wigfield, 2002; Schunk, Pajares, 2002). In an academic context, self-efficacy is an important source of study impulses, interest in study, and academic performance. Students who believe in their ability to organize, implement, and regulate problem-solving or task achievement on a specific level of competence have a high degree of self-efficacy.

Research on self-efficacy in the academic environment is of crucial importance because self-efficacy beliefs determine how students feel, what they think, how motivated they are, and how they behave. If people do not believe that their actions may produce the results that they deserve, they have little motivation to act or face difficulties (Bandura, 1995; 2001). In this context, it is desirable to reveal the correlations between academic self-efficacy and perceived academic stress.

Method

The aim of the paper is to analyse the correlations between academic self-efficacy and perceived academic stress. These are important psychological constructs that inform about the obstacles and difficulties in the academic environment.

Research sample consisted of 206 university students (19 males and 187 females) with mean age of 24 years (SD = 5). Demographic and study characteristics are shown in table 1.

Table 1. Demographic and study characteristics of research sample

	Total (N = 206)		Male (N = 19)		Female (N = 187)	
	Count	%	Count	%	Count	%
Age (n, SD)	24	5	25	5	24	5
Sex						
male	19	9 %	19	100 %	0	0 %
female	187	91 %	0	0 %	187	100 %
Type of study						
teaching	138	67 %	13	68 %	125	67 %
non-teaching	68	33 %	6	32 %	62	33 %
Year of study						
1st	48	23 %	2	11 %	46	25 %
2nd	37	18 %	2	11 %	35	19 %
3rd	35	17 %	7	37 %	28	15 %
4th (1st follow-up MA)	28	14 %	0	0 %	28	15 %
5th (2nd follow-up MA)	56	27 %	8	42 %	48	26 %
Ph.D.	2	1 %	0	0 %	2	1 %
Form of study						
full-time	180	87 %	16	84 %	164	88 %
distance	26	13 %	3	16 %	23	12 %

The research method included the application of two questionnaires. The Academic Stress Inventory (ASI, Novotný, Křeménková, unpublished version) is a new 17-item questionnaire, which uses 4 subscales (Stress related to study requirements; Work/Life balance; Organizational and social aspects of study; Expectation of good performance) on a 5-point Likert scale to identify the degree of experienced academic stress. The reliability of the questionnaire subscales equals $\omega = 0.813$, 0.823, 0.648 and 0.66.

The Academic Self-Efficacy Scale (ASES, Gafoor, Ashraf, 2006) is based on A. Bandura's concept and maps academic self-efficacy using 40 items on a 5-point Likert scale. The tool covers 12 dimensions of academic self-efficacy (Learning process, Reading, Comprehension, Memory, Curricular activities, Time management, Teacher-student relationship, Peer relationship, Utilization of resources, Goal orientation, Adjustment and Examination) all of which saturate the overall score. The reliability of the scales (values) reaches a good level, while the overall score achieves $\omega = 0.85$.

The data were analysed in SPSS 21 using descriptive statistics calculation, reliability test (Crombach α), Pearson correlation analysis, linear regression analysis. The assumptions for use were verified in advance.

Findings

Prior to the analysis of the correlations between academic self-efficacy and academic stress, the descriptive characteristics of each questionnaire scale were calculated (see Table 2).

Table 2. Descriptive statistics normalization of distribution, and reliability of ASES and ASI questionnaires

	Total (N = 206)		Male (N = 19)		Female (N = 187)		α
	Mean	SD	Mean	SD	Mean	SD	
Ac. stress: study demands	3,37	0,74	3,11	0,69	3,40	0,74	0,77
Ac. stress: work/life balance	3,33	1,00	3,19	0,90	3,34	1,01	0,799
Ac. stress: organ-social aspects of study	2,28	0,70	2,33	0,60	2,27	0,71	0,566
Ac. stress: expectation of good performance	3,16	0,94	2,84	0,97	3,20	0,94	0,604
Ac. self-efficacy: total score	135,34	19,33	141,47	15,78	134,72	19,58	0,898
Ac. self-efficacy: learning process	3,46	0,79	3,58	0,69	3,45	0,80	0,337
Ac. self-efficacy: reading	3,37	0,79	3,61	0,54	3,34	0,81	0,428
Ac. self-efficacy: comprehension	3,40	0,76	3,60	0,63	3,38	0,77	0,604
Ac. self-efficacy: memory	3,13	0,76	3,30	0,40	3,11	0,78	0,525
Ac. self-efficacy: curricular activities	3,49	0,65	3,41	0,59	3,50	0,66	0,433
Ac. self-efficacy: time management	2,75	1,01	2,50	1,01	2,77	1,01	0,513
Ac. self-efficacy: teacher-student rel.	3,53	0,95	3,82	0,71	3,51	0,97	0,507
Ac. self-efficacy: peer relat.	4,23	0,84	4,29	0,75	4,22	0,85	0,639
Ac. self-efficacy: util. of resources	3,81	0,80	3,82	0,73	3,80	0,81	0,44
Ac. self-efficacy: goal orientation	3,43	0,91	3,53	0,92	3,42	0,91	0,455
Ac. self-efficacy: adjustment	3,39	0,63	3,59	0,46	3,37	0,64	0,707
Ac. self-efficacy: examination	3,11	0,60	3,47	0,58	3,07	0,60	0,678

The basic correlation analysis revealed a number of significant relationships between the factors of academic stress and academic self-efficacy (see Table 3). The most significant correlations were observed in the study demands scale. In other variables the distribution of significant correlations for individual academic stress factors was variable. The strength of the correlations varied between weak and medium.

Table 3. Pearson correlations of academic stress and academic self-efficacy

	AS-SD	AS-WLB	AS-ORG	AS-EXP
Ac. self-efficacy: total score	-0,572**	-0,177*	-0,300**	-0,198**
Ac. self-efficacy: learning process	-0,300**	0,022	-0,100	-0,087
Ac. self-efficacy: reading	-0,244**	-0,090	-0,124	-0,086
Ac. self-efficacy: comprehension	-0,372**	-0,132	-0,254**	-0,230**
Ac. self-efficacy: memory	-0,397**	-0,140*	-0,126	-0,178*
Ac. self-efficacy: curricular activities	-0,378**	-0,248**	-0,176*	-0,064
Ac. self-efficacy: time management	-0,346**	-0,158*	-0,170*	-0,027
Ac. self-efficacy: teacher-student rel.	-0,332**	-0,005	-0,136	0,000
Ac. self-efficacy: peer relat	-0,163*	-0,068	-0,195**	-0,115
Ac. self-efficacy: util resources	-0,304**	-0,198**	-0,296**	-0,098
Ac. self-efficacy: goal orientation	-0,294**	-0,034	-0,191**	-0,095
Ac. self-efficacy: adjustment	-0,518**	-0,139*	-0,302**	-0,211**
Ac. self-efficacy: examination	-0,504**	-0,095	-0,165*	-0,193**

Notes: AS-SD – Ac. stress: study demands, AS-WLB – Ac. stress: work/life balance, AS-ORG – Ac. stress: organ.-social aspects of study, AS-EXP – Ac. stress: expectation of good performance

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

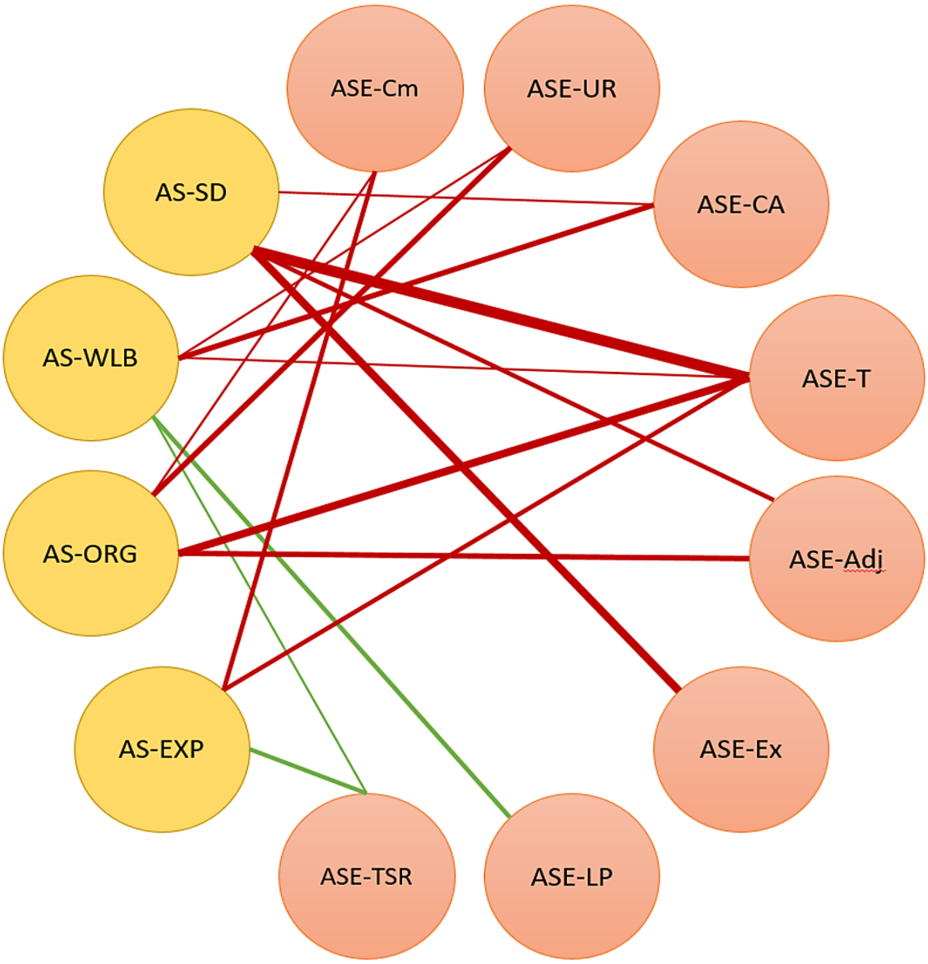
Then a series of linear regression analyses (given factors of academic self-efficacy (ASES) as the independent variable and factors of academic stress (ASI) as the dependent variable) was performed (see Table 4 and Figure

1). The results suggested that academic self-efficacy had the greatest effect on stress caused by study demands (32.4% and 33.6% of explained variance). The effect of academic self-efficacy on the remaining factors of academic stress was significantly weaker (2.7–11.9 % of explained variance). With the exception of two factors (learning process and teacher-student relationship), all ß-coefficients were negative, which means that with decreasing academic self-efficacy (its factors) the degree of academic stress increased (its factors).

Table 4. Linear regression models of effect of social competence on academic stress domains

	R^2	adj. R^2	F	p	std. ß	t	p
DV Ac. stress: study demands							
Model 1a	0,328	0,324	99,456	<0,001			
Ac. self-efficacy: total score					-0,572	-9,973	<0,001
Model 1b	0,375	0,336	9,660	<0,001			
Ac. self-efficacy: curricular activities					-0,165	-2,355	0,020
Ac. self-efficacy: adjustment					-0,221	-2,514	0,013
Ac. self-efficacy: examination					-0,261	-3,024	0,003
DV Ac. stress: work/life balance							
Model 2a	0,031	0,027	6,631	0,011			
Ac. self-efficacy: total score					-0,177	-2,575	0,011
Model 2b	0,145	0,092	2,728	0,002			
Ac. self-efficacy: learning process					0,212	2,648	0,009
Ac. self-efficacy: curricular activities					-0,246	-3,002	0,003
Ac. self-efficacy: teacher-student rel.					0,171	2,022	0,045
Ac. self-efficacy: util. resources					-0,171	-2,033	0,043
DV Ac. stress: organ.-social aspects of study							
Model 3a	0,090	0,085	20,112	<0,001			
Ac. self-efficacy: total score					-0,300	-4,485	<0,001
Model 3b	0,171	0,119	3,308	<0,001			
Ac. self-efficacy: comprehension					-0,180	-2,141	0,034
Ac. self-efficacy: util. resources					-0,234	-2,822	0,005
Ac. self-efficacy: adjustment					-0,239	-2,361	0,019
DV Ac. stress: expectation of good performance							
Model 4a	0,039	0,035	8,363	0,004			
Ac. self-efficacy: total score					-0,198	-2,892	0,004
Model 4b	0,111	0,055	1,999	0,026			
Ac. self-efficacy: comprehension					-0,190	-2,192	0,030
Ac. self-efficacy: teacher-student rel.					0,204	2,356	0,019

Figure 1. Circular network plot of stand. beta coefficients of academic self-efficacy's effect on academic stress (green – positive effect, red – negative effect, line width – strength of effect).



Captions: AS-SD: Ac. stress: study demands, AS-WLB: Ac. stress: Work/life balance, AS-ORG: Ac. stress: organ.-social aspects of study, AS-EXP: Ac. stress: expectation of good perform., ASE-T: Ac. self-efficacy: total score, ASE-LP: Ac. self-efficacy: learning process, ASE-Cm: Ac. self-efficacy: comprehension, ASE-CA: Ac. self-efficacy: curricular activities, ASE-TSR: Ac. self-efficacy: teacher-student rel., ASE-UR: Ac. self-efficacy: util. of resources, ASE-Adj: Ac. self-efficacy: adjustment, ASE-Ex: Ac. self-efficacy: examination.

Results, Conclusions and Recommendations

The aim of the study was to analyse the correlations between academic self-efficacy and academic stress. The results suggest a correlation between the two variables, most notably between academic self-efficacy and stress caused by study demands. Specifically, the results showed 32.4 % of explained variance in the overall score of academic self-efficacy and 33.6 % of explained variance in the three dimensions of academic self-efficacy (curricular activities, adjustment and examination). At the same time, this is a negative correlation, which means that with increasing values of academic self-efficacy, the degree of perceived stress caused by study demands decreases. The results suggest that self-efficacy can act as a relatively strong inhibitor of stress caused by exams, oral presentation, amount of learning content, and time-management in exam preparation. A detailed analysis of the three self-efficacy dimensions shows that in terms of content they are to a certain degree correlated with the study demands factor. It appears that from the perspective of academic stress, academic self-efficacy primarily inhibits stress related to the performance aspects of university study. Considering the definition of academic self-efficacy, in which this construct is the essential factor contributing to potential students' success as it includes

internal beliefs about the attainability of a task and the related academic goal (Bandura, 2004; Eccles & Wigfield, 2002; Schunk & Pajares, 2002), the results of this study appear to be entirely logical.
Most of the other results of the present study can be interpreted on a similar basis. In terms of the remaining academic stress factors, the effect of academic self-efficacy was significantly lower. In the case of work/life balance the effect was 2.7 % and 9.2 % of explained variance, while in the case of organizational and social aspects of study the effect equalled 8.5 % and 11.9% of explained variance. Both of these factors are a priori related to the non-performance aspects of study-related stress because they include items associated with the quality of university background, use of technology, communication with teachers and academic staff, as well as combining study and leisure. In these cases it appears logical that the strength of the relationship (explained variance) is not too strong since the principle of academic self-efficiency is more related to those areas in which the individual can be an active initiator. Nevertheless, even here a correlation was confirmed with a negative direction (with one exception, see below).

On the other hand, concerning the last factor (expectation of good performance), the weak degree of explained variance (3.5 % and 5.5 %) is rather surprising. In this case, a higher degree of correlation (explained variance) was expected because this factor (similarly to the first one) also reflects the performance aspects of study (stress based on these aspects). This area primarily includes own expectations of good performance and expectation of good performance by other people (family, friends, etc.) We believe that this correlation would deserve a further deeper analysis.

Finally, two additional academic self-efficacy dimensions should be mentioned. In this case, the direction of the correlation was positive. They include the following: learning process (in relation to work/life balance) and teacher-student relationship (in relation to expectation of good performance). As far as the first dimension is concerned, an increasing feeling of a student of being competent in learning and being able to get good marks increases stress from being unable to find balance between study and personal life. On an interpretive level it can be deduced that if students' beliefs in their own learning competence is followed by actions (learning, preparation for lectures, exams, etc.), they are likely to feel discomfort resulting from insufficient time for themselves and their own interests. Focusing on the second dimension, which is the ability to build good relationships with teachers and the ability to obtain help from them, increasing self-efficacy in this area increases stress related to own expectation of good performance (or expectation of good performance by family and friends). Also in this case the explanation seems to be relatively simple. If students are able to establish good relationships with their teachers and as a result are helped by the teachers (provision of materials, explanation of ambiguities, etc.), this increases their commitment to achieve good performance and increases their concerns (stress) about this help/relationship being reflected in reality. It can thus be speculated that stress related to poor performance may be saturated by concerns about losing (good) relationships with the teachers.

There are several limitations to this research study. The study was conducted by means of questionnaire-based methods, which in addition to indisputable advantages also entail numerous disadvantages (intentional or unintentional distortion of the results, issues about the respondents' self-assessment capability, etc.) The research sample consisted of university students of teaching professions and professions associated with the school environment (e.g. assistant teachers, educators, etc.) and predominantly female students, which reflects the real representation of men and women in the Czech educational environment. The results of this study should therefore be interpreted in the light of these limitations.

The results of the present study suggest interesting findings concerning the possible correlations between the level of academic self-efficacy and perceived academic stress. It appears that the relationship between self-efficacy and academic stress is a topical and relevant issue. Considering the assumption that self-efficacy implies confidence in one's abilities and beliefs in achieving the set goals, there is no doubt that in the university environment, self-efficacy is the basic factor that contributes to the students' potential success. The results of the present study suggest that self-efficacy may act as a relatively strong inhibitor in the area of academic stress. On the basis of the findings the authors believe it is desirable or even necessary to adjust undergraduate teacher training programmes to support their professional knowledge but also their personality (intrinsic) qualities including self-efficacy.

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The Effect of Social Competences on Perceived Academic Stress in University Students

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Abstract
Academic stress is multifactorial and stems from both academic and non-academic factors, including socio-cultural, environmental, and personality attributes. The important factors that cause stress among university students include, inter alia, students' social competences and social skills. The aim of the present study is to analyse the effect of the level and quality of social competences on perceived academic stress. The sample consisted of 696 university students. The data were collected using the Inventory of Social Competences (ISK) and the Academic Stress Inventory (ASI). The results of the correlation analyses showed a number of significant relationships of small to medium effect (r-values up to -0,369). According to the subsequent linear regression models, social competences affected the following stress domains: study demands (18.4% of explained variance), followed by expectation of good study performance (11.1%), organizational-social aspects of study (8.2%), and work-life balance stress (3.6 %).
Keywords: Social competences, academic stress, university student, Czech Republic

Introduction

Social competences are the skills that significantly affect the course of interpersonal interactions and the quality of the communication process. Social competences are part of human competences and are classified into three areas: social competence as the ability to assert oneself; social competence as the ability to adapt; social competence as a compromise between adaptation and self-assertion (Kanning, 2017). The definition and subsequent diagnosis of social competences are still complicated and controversial. The first diagnostic method was the Social Competence Inventory by Kanning (2009). The short version (SCI-S) is the result of an analysis of four factors: Social orientation, Offensiveness, Self-control, Reflexibility. A closer look at these factors of social competences reveals that the first factor includes building relationships with other people. This factor determines the extent to which an individual is actively interested in other people, listens to them, and approaches them. The second factor called Offensiveness suggests the extent to which an individual is willing to assert one's interests, distinguish oneself from others, or defend one's opinions. Self-control is generally focused on adaptability, flexibility, and internality. It is a measure of what is called resistance to mental stress. Reflexibility is considered the greatest benefit of this method. It identifies those individuals who are able to concentrate attention not only on their own and their partner's behaviour but also on the effect of their behaviour on the behaviour of others, which is important for high-stress professions, including the teaching profession (Hoskovcová, Vašek, 2017). Mapping of social competences in relation to various variables is becoming the focus of many research studies (Döpfner, Schlüter, Rey, 1981; Kanning, 2002; Hoskovcová, Vašek, 2017; Kanning, 2017).

Social competences tend to be identified as significant factors that affect the degree of academic stress, which appears to be one of the key mechanisms that co-determines the resulting quality of academic functioning of university students. The concept of academic stress is based on the concept of general stress (Cannon, 1932; Selye, 1976), is related to the university environment, and affects the students' mental wellbeing. Academic stress, which affects many students, may also be caused by other factors such as poor study habits, competition, financial problems, problems with personal and academic life management, or various changes in students' life (Baldwin, Wilkinson, Barkley, 2009; Fairbrother, Warn, 2003). According to Novotný and Křeménková (unpublished material), the following areas relate to academic stress: Stress associated with study demands, Work/Life balance, Organizational and social aspects of study, Expectation of good performance. Academic stress has become a ubiquitous problem across countries, cultures, and ethnic groups (Wong, Wong, Scott, 2006). It is known that a certain degree of stress is beneficial and motivates students for optimum performance. However, if a stressful situation is not managed effectively due to insufficient stress coping resources, it may have adverse consequences for both the student and the institution.

Method

Academic stress appears to be one of the key mechanisms that co-determines the resulting quality of academic functioning in university students. The important factors that cause stress among university students include, inter alia, students' social competences and social skills.

The objective of the research study is to analyse the quality and level of social competences in relation to perceived academic stress in university students of educational disciplines.

Research sample consisted of 696 university students (51 males and 645 females) with mean age of 23 years (SD = 6). Demographic and study characteristics are shown in table 1.

Table 1. Demographic and study characteristics of research sample

	Total (N = 696)		Male (N = 51)		Female (N = 645)	
	Count	%	Count	%	Count	%
Age (n, SD)	23	6	27	9	23	6
Sex						
male	51	7 %	51	100 %	0	0 %
female	645	93 %	0	0 %	645	100 %
Type of study						
teaching	462	66 %	36	71 %	426	66 %
non-teaching	234	34 %	15	29 %	219	34 %
Year of study						
1st	433	62 %	20	39 %	413	64 %
2nd	57	8 %	11	22 %	46	7 %
3rd	40	6 %	7	14 %	33	5 %
4th (1st follow-up MA)	98	14 %	5	10 %	93	14 %
5th (2nd follow-up MA)	65	9 %	8	16 %	57	9 %
Ph.D.	3	0 %	0	0 %	3	0 %
Form of study						
full-time	587	84 %	35	69 %	552	86 %
distance	109	16 %	16	31 %	93	14 %

The research method included the application of two questionnaires. The Academic Stress Inventory (ASI, Novotný, Křeménková, unpublished material) is a new 17-item questionnaire, which uses 4 subscales (Stress related to study demands; Work/Life balance; Organizational and social aspects of study; Expectation of good performance) on a 5-point Likert scale to identify the degree of experienced academic stress. The reliability of the questionnaire subscales equals $\omega = 0.813, 0.823, 0.648$ and 0.66.

The Social Competence Inventory (SCI, Kanning) uses 33 items on a 4-point scale to investigate the following four dimensions of social competences: Social orientation (SO), Offensiveness (OF), Self-control (SE), and Reflexibility (RE). The validity of the questionnaire was verified by means of standardization (Hoskovcová, Vašek, 2017). The reliability of the questionnaire in all dimensions ranges from $\alpha = 0.72$ to 0.79.

The data were analysed in SPSS 21 using descriptive statistics calculation, reliability test (Crombach α), Pearson correlation analysis, linear regression analysis. The assumptions for use were verified in advance. The study was conducted in compliance with applicable ethical principles.

Findings

Prior to the analysis of the correlations between social competences and academic stress, the descriptive characteristics of each questionnaire scale were calculated (see Table 2).

Table 2. Descriptive statistics normalization of distribution, and reliability of SCI and ASI questionnaires

	Total (N = 696)		Male (N = 51)		Female (N = 645)		α
	Mean	SD	Mean	SD	Mean	SD	
ASI: study demands	3,37	0,68	3,11	0,67	3,39	0,67	0,770
ASI: Work/life balance	3,39	0,96	3,18	0,89	3,40	0,96	0,799
ASI: organ.-social aspects of study	2,33	0,70	2,20	0,65	2,34	0,70	0,566
ASI: expectation of good perform.	3,25	0,91	2,88	1,00	3,28	0,90	0,604
SCI: Social orientation	30,34	3,66	30,78	3,73	30,31	3,65	0,644
SCI: Ofensivity	18,85	3,73	20,10	3,85	18,76	3,71	0,646
SCI: Self-control	20,26	4,47	21,98	5,01	20,12	4,40	0,771
SCI: Reflexibility	19,86	2,89	19,75	3,05	19,87	2,88	0,479

The basic correlation analysis revealed a number of significant relationships between the factors of academic stress and social competences (see Table 3) in all scales of the questionnaire except reflexibility. The strength of the correlations varied between weak and medium.

Table 3. Pearson correlations of academic stress (ASI) and social competence (SCI)

	ASI: study demands	ASI: Work/life balance	ASI: organ.-social aspects of study	ASI: expectation of good perform.
SCI: Social orientation	-0,096*	0,030	-0,185**	0,000
SCI: Ofensivity	-0,339**	-0,084*	-0,148**	-0,217**
SCI: Self-control	-0,369**	-0,180**	-0,261**	-0,296**
SCI: Reflexibility	0,010	0,031	0,070	0,067

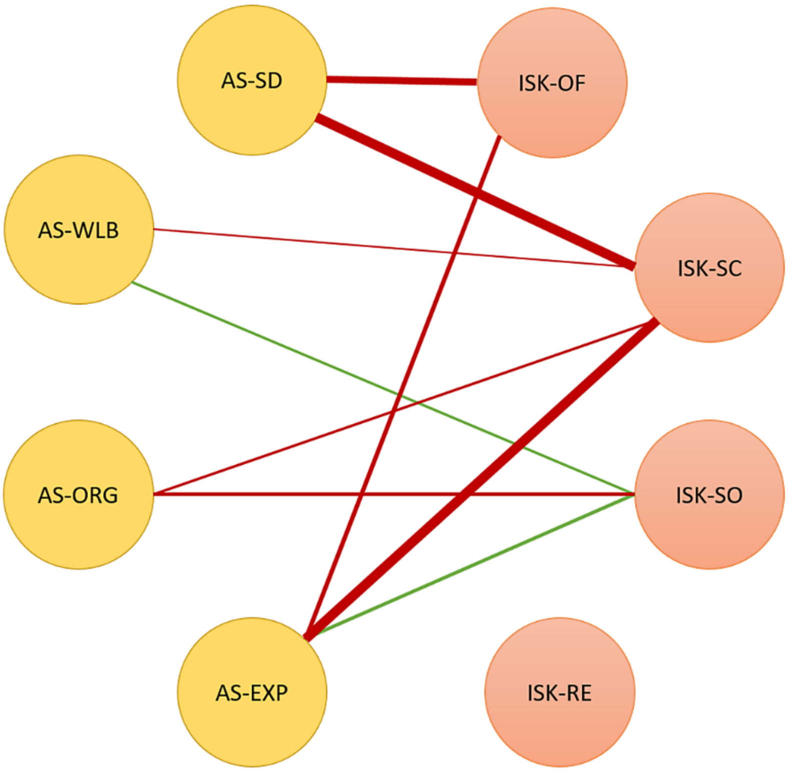
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Then a series of linear regression analyses (factors of social competences (SCI) as the independent variables and factors of academic stress (ASI) as the dependent variables) was performed (see Table 4 and Figure 1). According to the results, social competences have the greatest effect on stress associated with study demands, explaining 18.4 % of the variance; in this case a significant effect of offensiveness and self-control was confirmed with ß coefficients suggesting a negative correlation, where with a decreasing value of these social competence factors increases stress associated with study demands. The second most significant effect was observed in the case of expectation of good performance (11.1 % of explained variance) in relation to three significant predictors: social orientation, offensiveness, and self-control. A weaker effect of social competences (specifically social orientation and self-control) was observed in relation to organizational and social aspects of study (8.2 % of explained variance) and work/life balance (3.6 % of explained variance).

Table 4. Linear regression models of effect of social competence on academic stress domains

	R^2	adj. R^2	F	p	std. B	t	p
DV ASI: study demands	0,189	0,184	40,306	<0,001			
SCI: Ofensivity					-0,247	-6,616	0,000
SCI: Self-control					-0,296	-7,658	0,000
DV ASI: Work/life balance	0,041	0,036	7,456	<0,001			
SCI: Social orientation					0,097	2,452	0,014
SCI: Self-control					-0,036	-4,686	0,000
DV ASI: organ.-social aspects of study	0,088	0,082	16,605	<0,001			
SCI: Social orientation					-0,121	-3,133	0,002
SCI: Self-control					-0,071	-4,647	0,000
DV ASI: expectation of good perform.	0,116	0,111	22,722	<0,001			
SCI: Social orientation					0,107	2,795	0,005
SCI: Ofensivity					-0,151	-3,884	<0,001
SCI: Self-control					-0,272	-6,726	<0,001

Figure 1. Circular network plot of stand. beta coefficients of social competences' effect on academic stress (green – positive effect, red – negative effect, line width – strength of effect).



Captions: AS-SD: Ac.Stress: study demands, AS-WLB: Ac.Stress: work/life balance, AS-ORG: Ac.Stress: organ.-social aspects of study, AS-EXP: Ac.Stress: expectation of good perform., SCI -OF: SCI: Ofensivity, SCI -SC: SCI: Self-control, SCI-SO: SCI: Social orientation, SCI -RE: SCI: Reflexibility.

Results, Conclusions and Recommendations

Stress among university students is multifactorial and stems from both academic and non-academic factors, including socio-cultural, environmental, and personality attributes (Brand, Schoonheim, 2009). The important factors that cause stress among university students include, inter alia, students' social competences and social skills. The objective of the research study was to identify the correlation between the level of social competences and perceived academic stress in university students of educational disciplines.

The basic correlation analysis revealed a number of significant relationships between the factors of academic stress and social competences in all scales of the social competence questionnaire except reflexibility. The strength of the correlations varied between weak and medium. Subsequently, a series of linear regression analyses showed that social competences (offensiveness and self-control) had the greatest effect on stress associated with study demands (18.4 % of explained variance). This was a negative correlation where a decreasing value of the factors of social competences resulted in an increase of perceived stress associated with study demands. This implies that students who are not willing or are not able to fight for themselves and their interests (offensiveness) and students who have lower adaptability, flexibility, and generally lower resistance to stress (self-control) perceive more intensive stress in relation to study demands. Specifically, this may include preparation for exams and classes, excessive learning content and a high number of exams, stress related to understanding of the learning content, time requirements, and active presentations in lectures or seminars.

The second most significant effect was observed in the case of expectation of good performance (11.1 % of explained variance) in relation to three significant predictors: social orientation, offensiveness, and self-control.

In the case of offensiveness and self-control the correlation was negative. This means that a decreasing value of offensiveness and self-control increases academic stress. These students report increased subjective perception of stress related to their own expectations of good performance and to the expectations of their family and friends in the context of their study and exams.

It might be interesting to compare the results (concerning expectation of good performance) with the issue of performance motivation. Expectation of good performance, which causes more intensive academic stress, is a significant part of performance motivation and is affected by multiple factors (Schuler, Prochaska, 2003). For example, an experiment conducted by Kukla (1972) suggested that individuals with high performance motivation to succeed (achieve good results) were much better able to assess their own capabilities compared with individuals with low motivation. Similarly, Seligman (2003) confirmed that individuals with higher performance motivation had a general tendency to believe in having relatively good abilities compared with individuals with low performance motivation. Individuals with low performance motivation rather show feelings of helplessness. It is a question whether these aspects of performance motivation are in any way related to decreased social competences, offensiveness, and self-control with a subsequent impact on the intensity of perceived academic stress in the area of expectation of good performance. This topic surely deserves an in-depth analysis.

An interesting result in the context of the present paper is the effect of expectation of good performance and the social orientation predictor. This is a positive correlation where increasing social orientation increases the intensity of perceived academic stress. This means that individuals who are more socially oriented (interested in other people, empathetic, and tolerant) perceive higher academic stress as a result of their own expectations of good performance and the expectations of their family and friends concerning their performance during the course of study. It is probably their focus on other people and pro-social nature that increase their feelings of responsibility to achieve good performance as expected by their family and friends and as they wish themselves. This implies that the pro-social nature of these individuals increases the intensity of perceived academic stress. A weaker effect of social competences (specifically social orientation and self-control) was observed in relation to organizational and social aspects of study (8.2 % of explained variance) and work/life balance (3.6 % of explained variance).

The results of the present study suggest interesting findings concerning the possible correlations between the level of social competences and perceived academic stress. It appears that the relationship between social competences and academic stress is a topical and relevant issue. It is known that a certain degree of stress is beneficial and motivates students for optimum performance. However, if a stressful situation is not managed effectively due to insufficient stress coping resources, it may have adverse consequences for both the student and the institution. Academic stress has become a ubiquitous problem across countries, cultures, and ethnic groups (Wong, Wong, Scott, 2006). The authors of the present paper believe that undergraduate teacher preparation should include the training of diagnostic and social skills, which should gradually improve the quality of social competences of university students, in this case future teachers. It appears that education and practical experience in this area could probably have a positive effect on the regulation of at least some aspects of perceived academic stress among university students.
In conclusion, the results suggest that the level of social competences plays a significant role in the perception of academic stress. It has been demonstrated that the level of social competences increases the intensity of perceived stress except social orientation. Social orientation is positively correlated with perceived academic stress (higher social orientation causes higher intensity of perceived academic stress), with the strongest correlation (18.4 % of explained by variance) in relation to the intensity of perceived stress associated with study demands.

The limitations of the present study are mentioned below. One of them is the process of participant recruitment (students of the Faculty of Education). Another limitation is the method of data collection (questionnaires), which provides space for subjective (whether intentional or unintentional) data distortion, both in a positive and negative direction. The results of the study should therefore be interpreted in the light of these limitations.

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The Impact of Perceived Academic Stress on University Students' Academic Achievement

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Abstract
The aim of the study is to analyse the correlations between academic achievement and academic stress. Academic achievement is one of the key factors used in the assessment of students´. Therefore, it is desirable to search for correlations with other factors. In this context, it appears that the crucial aspect influencing the success of students is the level of stress. The sample consisted of 539 students. The data were collected using the Academic Achievement Questionnaire and Academic Stress Inventory. The results showed significant relationships of small to medium effect (r-values ranging from -0.109 to -0.351) between academic stress and non-performance aspects of academic achievement, including handling of study demands and social adaptation. The strengths of the associations differed between genders with male students showing fewer but stronger associations (r ranging from -0.281 to -0.443), and female students showing more but slightly weaker associations (r ranging from -0.143 to - 0.392).
Keywords: Academic achievement, academic stress, university students

Introduction

The university environment is a complex system that comprises a number of variables. These variables include the general education policy and its practical application, the specific educational institution, or the attitude of the faculty, department, teachers, other university staff, and of course the students. Perhaps the most noticeable aspect that informs whether university study develops as desired is the students' academic achievement. However, this does not only reflect the results of the study but also provides information about the students' capabilities and to a large extent predicts the students' further (professional) achievement (Živčić-Bećirević, Smojver-Ažić, & Martinac Dorčić, 2017). According to many authors (e.g. Busato, Prins, Elshout, & Hamaker, 2000; Křeménková, Dobešová Cakirpaloglu, Pugnerová, 2018; Komarraju, Karau, & Schmeck, 2009; Leonard, & Insch, 2005; Prevatt, Li, Welles, Festa-Dreher, Yelland, & Lee, 2011), academic achievement is perceived as a compendium of performance and non-performance factors (see also Křeménková, Plevová, Pugnerová 2019). At the same time, academic achievement is not a single invariable value but rather a construct that develops over time and is associated with a number of other variables. As a result, this puts pressure on students and their personality qualities and social skills, but also on other actors in the education system and their ability to respond flexibly and efficiently to the changing conditions and the students' needs.

It is generally believed that academic stress entails adverse and negative circumstances related to the requirements to cope with academic (university) life[1] (Pozos-Radillo, Aguilera-Velasco, & Delgado-García, 2014) and that it is one of the aspects that directly affects academic achievement. After all, these two concepts share some specific factors (especially those relating to non-performance factors such as time management,

[1] It should be noted that a number of authors believe that academic stress is caused by stressors that originate not only in the academic but also in the non-academic environment (Bedewy, & Gabriel, 2015; Bhavani, Mansoor, & Prashantha, 2018; Brand, & Schoonheim-Klein, 2009). Regarding the concept of this paper and the method applied, the authors adhere to the narrower concept of academic stress, where the stressors relate only to the academic environment.

coping with study requirements, etc.), albeit from different perspectives. The common stressors in the academic environment on the part of the students include poor time management, weak social skills, competition, adoption of inappropriate learning styles (e.g. mechanical learning), etc. (Fairbrother & Warn, 2003). At the same time, other specific factors need to be reflected, including problems in financial management, changes in personal life, inability to reconcile personal and academic life, etc. (Byron, Brun & Ivers, 2008; Bedewy, & Gabriel, 2015; Goff, 2011; Khan, S. Altaf, and H. Kausar, 2013; Moscaritolo, 2009). In important role is also played by the educational institution and the educational system, where the sources of stress include for example overcrowded lecture halls, system of grading in academic years (semesters), lack of material resources, equipment and services (Awino & Agolla, 2008), extent of the curriculum, excessive tasks and assignments and insufficient time for completion, as well as high teachers' expectations (Bedewy, & Gabriel, 2015; Elias & Ping, 2011)[2]. At the same time, it should be added that the effects of these factors differ not only by personality but also in relation to the year, field, and type of study (Chowdhury, Mukherjee, Mitra, Naskar, Karmakar, & Lahiri, 2017; Sohail, 2013).

The correlations between academic achievement and academic stress have been confirmed by research studies (e.g. Herath, 2019; Khan, Altaf, & Kausar, 2018), but there is still a lot of room for further research on the development of new diagnostic methods, monitoring of the effect of different variables (field and type of study, demographic variables, etc.), or more general conceptualization of the constructs. The aim of the present study is to verify the developed measurement tools (see also Křeménková, 2019; Křeménková, Plevová, Pugnerová 2019) and to analyse the correlations between academic stress and academic achievement with respect to the possible effects of the demographic characteristics among the students of teaching courses. As has already been mentioned, both of these constructs are essential in the academic environment and significantly affect the partial and overall results of students and even universities. At the same time, they can have a negative effect in the form of career stoppers by compromising students' professional career and contributing to a number of negative social and economic implications (Kadapatti & Vijayalaxmi, 2012; Živčić-Bećirević, Smojver-Ažić, & Martinac Dorčić, 2017).

Method

The main research questions were as follows: "What are the associations between academic achievement and academic stress in university students?" and "Does gender affect the relationship between academic achievement and academic stress?"

The research sample consisted of 539 university students (mean age = 22.8, SD = 6.53) of whom 57 were male (mean age = 26.4, SD = 9.09) and 482 were female (mean age = 22.4, SD = 6.03). For more details about the research sample see Tables 1.

Table 1. Characteristics of respondents

	Whole sample	**Men**	**Women**	
	N (%)	**N (%)**	**N (%)**	**p**
Sex	539 (100)	57 (10,6)	482 (89,4)	
Age, mean (SD)	22,8 (6,53)	26,4 (9,09)	22,4 (6,03)	0,002
Type of study				0,138

[2] At the same time, it is important to understand that the objective of educational institutions and students should not be to reduce stress to a "zero" level, as stress causes positive pressure to deliver optimal performance, but rather to learn to cope with stress in an adequate way and adopt sufficient and effective stress management techniques (Reddy, et. al 2018).

teaching	344 (63,8)	30 (52,6)	314 (65,1)
non teaching	193 (35,8)	25 (43,9)	168 (34,9)

Note: p = signifikance t-testu/Chí-kvadrát testu rozdílů mezi pohlavími

The research method included the application of two questionnaires. The Academic Stress Inventory (ASI, Novotný & Křeménková, unpublished material) is a new 17-item questionnaire, which uses 4 subscales (Stress related to study demads; Work/Life balance; Organizational and social aspects of study; Expectation of good performance) on a 5-point Likert scale to identify the degree of experienced academic stress. The reliability of the questionnaire subscales equals ω = 0.813, 0.823, 0.648 and 0.66.

The Academic Achievement Questionnaire (AAQ, Křeménková & Novotný, in preparation) is a new 9-item questionnaire designed to measure academic achievement. The questionnaire includes three subscales: study performance, coping with study requirements, and social adaptation. The items are rated on 6-point Likert scale. The first subscale is calculated as a weighted mean of ECTS grades, while the remaining subscales are calculated as mean response values. The reliability of the questionnaire subscales equals ω = .801, .810, and .638.

The study was conducted in compliance with applicable ethical principles. The research study involved university students on a voluntary basis; the participants were informed about the possibilities to terminate their participation at any stage of the research without giving a reason. The participants consented to anonymous data processing and use of data for scientific purposes.

The data were analysed in SPSS 21 using descriptive statistics calculation, Pearson correlation analysis, calculation of age-adjusted standardized scores (standardized linear regression residues), t-tests, and inferential test with Fisher's Z transformation. The assumptions for use were verified in advance.

Findings

Prior to the analysis of the correlation between academic achievement and academic stress, the descriptive characteristics of each questionnaire scale were calculated (see Table 2). Also, the normality of data distribution was checked and a possible confounding effect of age was analysed (to eliminate age-related distortions in correlations of variables).

Table 2. Descriptive statistics, normalization of distribution, and reliability of the academic stress and academic achievement questionnaires

	Mean	SD	Min	Max	Norm	ZSkew	ZKurt	α
Acad. stress: SD	3,35	0,66	1,1	5,0	< 0,001	-1,93	-0,56	0,762
Acad. stress: WLB	3,39	0,94	1,0	5,0	< 0,001	-2,84	-2,09	0,783
Acad. stress: OSA	2,33	0,70	1,0	4,3	< 0,001	2,49	-1,43	0,577
Acad. stress: EGP	3,25	0,91	1,0	5,0	< 0,001	-2,51	-1,93	0,608
Acad. achiev.: SP	4,66	0,79	1,9	6,0	< 0,001	-4,16	2,83	0,829
Acad. achiev.: CSR	3,95	0,97	1,0	6,0	< 0,001	-2,23	-0,15	0,721
Acad. achiev.: SA	4,52	0,99	1,0	6,0	< 0,001	-5,30	2,12	0,431

Note: Acad. stress: SD – study demands, Acad. stress: WLB – work/life balance, Acad. stress: OSA – organizational and social aspects of study, Acad. stress: EGP – expectation of good performance, Acad. achiev.: SP – study performance, Acad. achiev.: CSR – coping with study requirements, Acad. achiev.: SA - social adaptation, SD – standard deviation, ZSkew – skewness z-score, ZKurt – Kurtosis z-score, Norm – normality of distribution (Kolmogorov-Smirnov)

According to the results, the data did not have a normal distribution (Tab. 2) and at the same time a number of variables were correlated with age (Tab. 3). Therefore, the scores of the variables were standardized to achieve Z-scores adjusted for age (using the calculation of regression analysis standardized residues). This resulted in Z-scores of the variables with an average of 0.000 and standard deviation of 0.968.

Table 3. Correlations of academic stress factors with age

	AS:SD	AS:WLB	AS:OSA	AS:EGP	AA:SP	AA:CSR	AA:SA
Age	-0,074	-0,017	-0,085*	-0,161**	-0,114**	-0,045	0,166**

*Note: AS:SD – academic stress, study demads, AS:WLB – academic stress, work/life balance, AS:OSA – academic stress, organizational and social aspects of study, AS:EGP – academic stress, expectation of good performance, AA:SP – academic achievement, study performance, AA:CSR - academic achievement, coping with study requirements, AA:SA - academic achievement, social adaptation, * - significant at a level of 0.05, ** - significant at a level of p < 0.01*

The basic correlation analysis revealed a number of significant relationships between the factors of academic stress and factors of academic achievement (see Table 4). Academic stress is therefore not related to the performance aspects of academic achievement (to the grades that students achieve).

Table 4. Correlation between the factors of academic stress and academic achievement (N = 539)

	AS:SD	AS:WLB	AS:OSA	AS:EGP
AA:SP	-0,022	-0,025	0,001	0,025
AA:CSR	-0,351**	-0,161**	-0,190**	-0,109*
AA:SA	-0,320**	-0,123**	-0,294**	-0,165**

*Note: AS:SD – academic stress, study demads, AS:WLB – academic stress, work/life balance, AS:OSA – academic stress, organizational and social aspects of study, AS:EGP – academic stress, expectation of good performance, AA:SP – academic achievement, study performance, AA:CSR - academic achievement, coping with study requirements, AA:SA - academic achievement, social adaptation, * - significant at a level of 0.05, ** - significant at a level of p < 0.01*

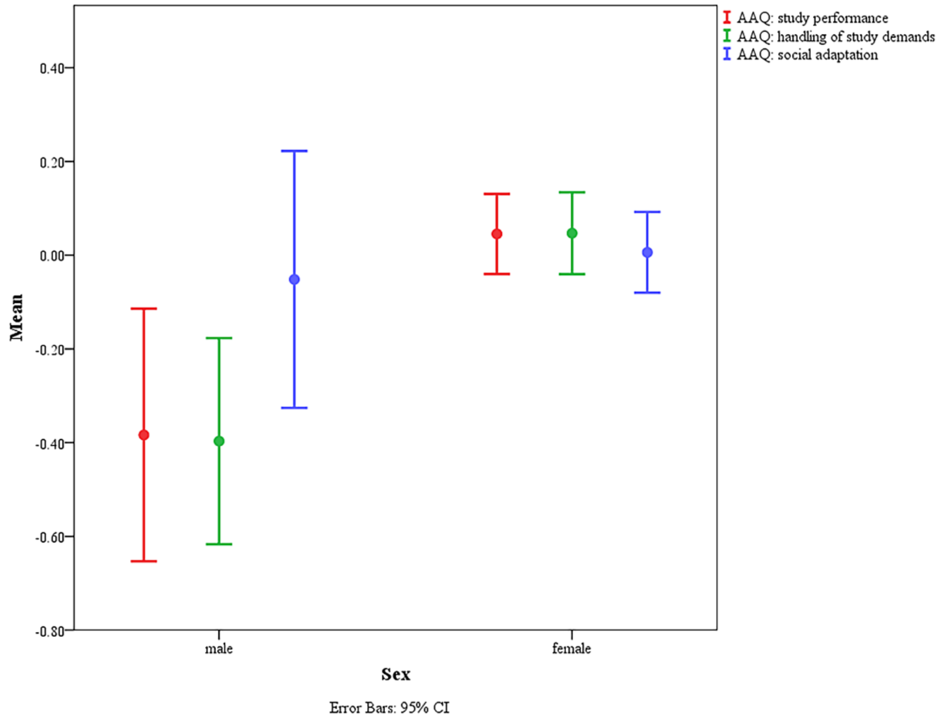
Then a series of correlation analyses was performed between the factors of academic stress (ASI) as the independent variables and factors of academic achievement (AAQ) as the dependent variable. The first step was to verify the possible effect of gender (see Table 5 and Graph 1a, b).

Table 5. Significance of differences in the mean values of AAQ and ASI factors in the context of gender

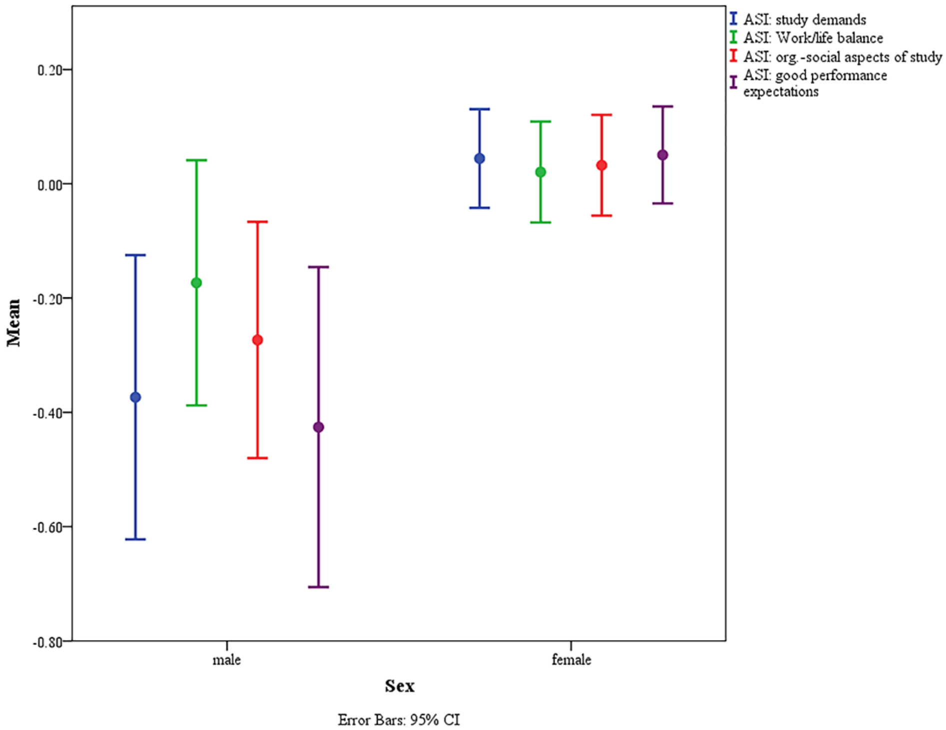
			95% CI	
	t	p	lower	upper
Academic stress: SD	-3,100	0,002	-0,683	-0,153
Academic stress: WLB	-1,669	0,099	-0,425	0,037
Academic stress: OSA	-2,717	0,008	-0,530	-0,082
Academic stress: EGP	-3,543	0,000	-0,740	-0,212
Academic achievement: SP	-3,185	0,002	-0,694	-0,164
Academic achievement: CSR	-3,297	0,001	-0,708	-0,179
Academic achievement: SA	-0,426	0,670	-0,325	0,209

Note: Academic stress: SD – study demads, Academic stress: WLB – work/life balance, Academic stress: OSA – organizational and social aspects of study, Academic stress: EGP – expectation of good performance, Academic achievement: SP – study performance, Academic achievement: CSR – coping with study requirements, Academic achievement: SA - social adaptation

Graph 1a. Distribution of the mean values of AAQ scales by gender



Graph 1b. Distribution of the mean values of ASI scales by gender



The results of the t-test suggested a possible effect of gender in a number of factors. Therefore, correlation analyses between ASI and AAQ were then performed separately for each gender (see Table 6 and 7). In the group of men, a correlation was observed between academic stress and social adaptation as a subscale of academic achievement with the strongest link with stress related to study requirements (r=-0.443). In the group of women, in addition to social adaptation, significant correlations were also observed in the subscale of coping with study requirements, where the strongest link was again with stress related to study requirements (r=-0.392 and -0.312).

Table 6. Correlation between the factors of academic stress and academic achievement for men (N = 57)

	AS:SD	AS:WLB	AS:OSA	AS:EGP
AA:SP	-0,014	-0,009	0,005	-0,120
AA:CSR	-0,212	0,014	0,011	0,052
AA:SA	-0,443**	0,058	-0,296*	-0,281*

*Note: AS:SD – academic stress, study demands, AS:WLB – academic stress, work/life balance, AS:OSA – academic stress, organizational and social aspects of study, AS:EGP – academic stress, expectation of good performance, AA:SP – academic achievement, study performance, AA:CSR - academic achievement, coping with study requirements, AA:SA - academic achievement, social adaptation, * - significant at a level of 0.05, ** - significant at a level of p < 0.01*

Table 7. Correlation between the factors of academic stress and academic achievement for women (N = 482)

	AS:SD	AS:WLB	AS:OSA	AS:EGP
AA:SP	-0,044	-0,036	-0,014	0,022
AA:CSR	-0,392**	-0,186**	-0,223**	-0,154**
AA:SA	-0,312**	-0,143**	-0,299**	-0,154**

*Note: AS:SD – academic stress, study demands, AS:WLB – academic stress, work/life balance, AS:OSA – academic stress, organizational and social aspects of study, AS:EGP – academic stress, expectation of good performance, AA:SP – academic achievement, study performance, AA:CSR - academic achievement, coping with study requirements, AA:SA - academic achievement, social adaptation, * - signifikantní na hladině 0,05, ** - signifikantní na hladině 0,01*

Subsequently, an inference test was performed (by means of Fisher's Z-transformation) to identify the significance of the differences in the correlation coefficients (see Table 8). Although the previous results suggested that in both men and women the distribution of significant correlations between ASI and AAQ as well as the sizes of the correlation coefficients differed, the inference test did not confirm any significant differences. In this context, it should be noted however that the identified non-significant differences in the correlation coefficients were caused by the different sizes of the two groups (particularly by the small number of men). After the sizes of the two groups were experimentally equalized, then the differences in the correlation coefficients were significant.

Table 8. Inference test of correlation coefficients in the context of gender

	AS:SD		AS:WLB		AS:OSA		AS:EGP	
	Z	p	Z	p	Z	p	Z	p
AA:SP	0,207	0,836	0,190	0,849	0,135	0,893	-0,998	0,318
AA:CSR	1,388	0,165	1,411	0,158	1,656	0,098	1,444	0,149
AA:SA	-1,067	0,286	1,409	0,159	0,023	0,982	-0,930	0,352

Note: AS:SD – academic stress, study demands, AS:WLB – academic stress, work/life balance, AS:OSA – academic stress, organizational and social aspects of study, AS:EGP – academic stress, expectation of good performance, AA:SP – academic achievement, study performance, AA:CSR - academic achievement, coping with study requirements, AA:SA – academic achievement, social adaptation

Results, Conclusions and Recommendations

The main objective of the study was to analyse the correlations between academic achievement and academic stress, as these are the two key factors in the academic environment. The results have confirmed the correlations between the constructs, particularly in terms of the non-performance factors of academic achievement and all academic stress factors. The strength of the correlations varied between weak and medium. In other words, academic stress affects the degree of academic achievement, especially in terms of coping with study requirements and social adaptation. It is therefore clear that in the group of undergraduate students of teaching in the Czech Republic the performance aspects of academic achievement are directly affected by other variables (for example academic motivation, learning approaches, etc.) A higher level of stress in students is related primarily to a lower ability to cope with the time requirements of their study, prepare for exams, or establish or maintain relationships with classmates, and communicate with teachers or other academic or non-academic staff. In this context, the question is whether these factors (non-performance) influence the actual performance and exams results. If yes, it could be speculated that academic stress indirectly affects the performance aspects of academic achievement through the non-performance aspects. However, further investigation would be needed to confirm this assumption (e.g. a mediation analysis of mutual associations).

To a certain extent, the results of the present study confirm the conclusions of other studies (see for example Herath, 2019; Khan, Altaf, & Kausar, 2018), but the differences in the factors of academic achievement between the studies need to be taken into account. In the present study, academic achievement is perceived as a three-factor construct saturated not only by the performance but also non-performance factors (coping with study requirements and social adaptation). In this case, the results of the present study do not clearly support those studies (see for example Oketch-Oboth & Okunya, 2018) that have confirmed the correlation between academic achievement (its performance component—final evaluation, GPA, etc.) and academic stress.

In the present context, gender-based differences were also confirmed[3]. This result is supported by a number of other studies (see for example Calaguas, 2011; Garrett, 2001; Herath, 2019) which suggest that women in general show a higher degree of stress and worse stress coping strategies than men and that their academic results are more affected by stress. The present study generally suggests that in the group of men, significant correlations have been confirmed only between academic stress and social adaptation (as a non-performance factor of academic achievement), whereas in women, significant correlations have been confirmed not only in social adaptation but also in the subscale of coping with study requirements. Women thus appear to be more sensitive to perceived stress in the academic environment, and are increasingly affected by this stress in multiple aspects of academic achievement. Regarding the fact that in the Czech environment teachers and other professionals in this sector (for example special assistants, educators, or special teachers) are predominantly women, these results are important and represent challenges for educational institutions to take these results into consideration in the process of undergraduate teacher training.

The present study has some limitations. The first limitation is the research sample, which consists of a specific group of university students of education. The second limitation is the cross-sectional nature of the study, which does not allow assessment of the interactions between variables in time. The third limitation is the questionnaire nature of the study, which inherently entails a number of problematic aspects (for example the possibility of intentional or unintentional distortion of data by the respondents; questionnaires do not measure reality but rather how individuals see themselves, etc.). The fourth and final limitation may be the period during which the questionnaire was completed (February and March). This is the beginning of the summer semester, which in terms of exams does not pose any stringent requirements on the students. However, many authors believe that the degree of stress varies in relation to the stage of the semester, being considerably higher in the exam period (see e.g. Bedewy & Gabriel, 2015; Brand &Schoonheim-Klein, 2009). Therefore, the results should be understood in the context of these specifics.

In conclusion, the findings have clearly confirmed the correlation between academic achievement (especially coping with study requirements, and social adaptation) and academic stress. These findings are crucial,

[3] Although the inference test has not confirmed significant gender-based differences, it is clear that the identified non-significant differences in the correlation coefficients were caused by the different sizes of the two groups (particularly by the small number of men). When the sizes of the two groups were experimentally equalized, the differences in the correlation coefficients were significant.

especially in the context of this particular research sample comprising university students of teaching, most of whom are women. For this reason, it is necessary to accentuate and improve the ability of teachers and other educational professionals to recognize that they are exposed to a higher degree of stress, as well as train them in adequate stress coping techniques. Given the gender differences concerning the effect of stress on academic achievement, an individual approach to students is needed, respecting their personality traits and other characteristics in the development of these skills.

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The Relationship Between Internet Addiction, Personality, and Depression in Pre-service Teachers of Generation Y and Z

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Abstract
The aim of the research is to evaluate the relationship between potential internet addiction, personal traits self-esteem and depression among pre-service teachers belonging to Generation Y or Z. The participants were 284 pre-service teachers aged 19-36 (SD 3, 81). To determine the empirical data, we used the following research methods: Neo Big-Five Inventory, Young Internet Addiction Test, Beck Depression Inventory-II and Sociodemographic Questionnaire. A negative relationship was found between age, self-esteem, personality traits, internet addiction and the level of depression among social network users. The results of the research suggested the following intergenerational differences. The results also showed that Generation Z pre-service teachers have higher values in the scale Neuroticism than Generation Y. The generation Z pre-service teachers have significantly higher level of depression than the Generation Y pre- service teacher.
Keywords: Internet addiction, depression, personality, pre-service teacher, generation Z

Introduction

Currently, the internet and social media are the most frequent communication tools. Especially for the young generation these tools are a normal part of their lifestyle. The social media allow communication with friends and acquaintances who may be at the other end of the world, and at the same time offer several services that are currently very popular. These services include posting photographs and interests, chatting, or establishing relationships by means of various dating portals. These services are also popular among companies and associations as a way of social network presentation. As a result of these attractive features, the number of social network users is gradually increasing. The growing use of the internet is transforming the social media and is affecting our society (Donath, Boyd, 2004; Ellison, Steinfield, Lampe, 2007).

The social networks and the opportunities that they provide are most popular among the youngest generations Y and Z. They represent an important means of establishing contact with the outside world. In this cyberspace they can share, create, inform, and consume the services offered. However, frequent escape to cyberspace is associated with serious problems, especially in adolescents. Adolescent individuals are more susceptible to pathological use of the internet because they have a weaker ability to control their enthusiasm for what arouses their interest (Tsai, Lin, 2003; Bell 2007). It may easily happen that excessive use of the internet and social networks becomes an addiction. Addiction to social media is defined as a psychological problem and is increasingly important especially in relation to other negative consequences in everyday life and relationships. This usually happens when social networking gets out of control (Yoo, et al., 2004).

Addiction reflects a combination of several internal and external factors that influence the development of every individual. An increase in internet-related psychosocial problems was observed in late 1990s (Young, 1996). The focus of researchers turned to various correlations, especially between demographic data, self-concept (self-esteem), and personality characteristics. Some studies revealed that excessive use of the internet may be related to depression or low self-esteem (Tsai, Lin, 2003; Bell 2007). Similarly, the present study examines the correlation between potential internet addiction (IA), age, gender, depressiveness, and personality traits (Big5).

A number of researchers revealed that excessive use of modern technology is mostly related to users whose addiction manifests as reduced tolerance, mood changes, and conflicts (Griffiths 1995; Kuss, Griffiths, Karila, Billieux, 2014; Hawi, Samaha, Griffiths, 2018). According to the study, addictions to different technologies have common risk factors and are therefore interlinked (Salehan, Negahban 2013; Anderson, John, Keltner, 2012). However, concepts such as internet addiction (IA) and social media addiction (SMA) are often distinguished. Social media addiction is further divided into several sub-types including gaming, cybertrading, cybersexual addiction, surfing, etc. (Young, Pistner, O'mara, Buchanan, 1999; Hawi, et al., 2018).

Age of Generations Y and Z

The term generation (cohort) means a group of individuals born in a specific period. This group is affected by the same social, cultural, economic, and political circumstances, as well as scientific and technological changes and developments. These effects are very influential in the shaping of individuals of the specific generation. Each generation is characterized by dominant values, specific personality traits, judgements, attitudes, and behaviours, which reflect the events and experiences of the specific period (Messarra, 2014). There are several classifications, but the commonly acknowledged system is as follows: Generation born before 1945, Baby Boomers (born from 1946), Generation X (born from 1965), Generation Y (born from 1980), and Generation Z (born between 1996 and 2000 and later). Recently, another name has appeared for the generation born after 2010: generation Alpha (Cabi, 2018). The present study focuses on the generation who is currently studying at the university, was born in the period of technological development, and cyberspace is virtually an essential part of their lives. For the purposes of the present study, below is a brief description of Generations Y and Z.

Generation Y:

A typical feature of this generation is frequent use of the internet and other technologies. This generation matured in the period of fast development of modern technology. This generation is not too patient and does not enjoy waiting, which is supported by the speed of problem solving by means of social networks. People belonging to this generation are constantly connected. Communication and collaboration are their top priority and at the same time they are very mobile, which is reflected in their professional life, as they are ready for continuous personal improvement and career growth. They adapt quickly to the changing conditions of society, but this also entails a desire to dictate their own rules if they feel that these rules could be beneficial. They also have a great desire to consume and they want everything at once. They are infantile and reluctant to adopt an independent adult life. However, this is an educated generation born in a globalized world, which is reflected in tolerance and respect for other races, ethnic groups, cultural values, and preference of the so-called inclusive management style. They work to live (Eisner, 2005; Berkup, 2014; Koshel, Shklyar, Avtonomova, Shilina, 2019).

Generation Z:

In terms of development, this is one of the fastest-developing generations and from an early age has been accompanied by technology and its progress. Not surprisingly, members of this generation are identified as iGen, digital natives, or multi-tasking generation (Cassany, Atalaya, 2008; Reig, Viched 2013; Koshel et al., 2019). Technology is associated primarily with social networks and media, which are used by this generation daily. They have their mobile phone attached to them all the time and are usually online 24/7. For this generation, the use of social networks is common, they can search for information but lack the ability of critical thinking (Rothman, 2016). A typical feature of Generation Z is the ability of fast processing of complex information in a short period of time and developed cognitive functions and psychomotor coordination, which help solve difficult mental tasks. On the other hand, their attention capacity is reduced (Smith, 2019) and they tend to be impatient (Berkup, 2014). This generation is capable of quick reactions and longs for interaction. They are also considered to be “experts” competent in IT (Bennett, Maton, Kervin, 2008; Echenique, 2013; Cruz, Díaz, 2016).

Personality and self-esteem in relation to IA and SMA

Scholarly literature includes several studies that focus on personality traits to analyse the behaviour and conduct of individuals addicted to modern communication technology. Some studies using the Big5 model have confirmed a negative correlation between the extraversion personality trait and internet use (Hawi et al., 2018; Armstrong, Phillips, Saling, 2000; Cole, Hooley, 2013; Randler, Horzum, Vollmer 2013; Wang, Ho, Chan, Tse, 2015). There are other studies on extraversion and addictive use of social media, according to which these individuals have a lower tendency to play computer games and fulfil their interpersonal needs over the internet (Chang, Lee, Hsieh, 2019). In the case of neuroticism, many researchers agree that greater use of social networks increases not only addiction but also anxiousness, which tends to be associated with lower emotional regulation. As a result, more neurotic individuals are more likely to be addicted to social networks (Chang, Lee, Hsieh, 2019). Individuals with neuroticism tend to use social networks as a means of increasing their self-esteem and developing a sense of belonging to the group (Hawi et al., 2018).

Problematic behaviour on the internet is negatively correlated with emotional stability, agreeableness, conscientiousness, and openness to experience (Hawi et al., 2018; Wilson, Fornasier , White 2010; Ko, Yen, Yen, Chen, Chen, 2012; Dong, Wang,Yang,Zhou, 2013; Kuss, Griffiths, Binder 2013; Müller, Koch, Dickenhorst, Beutel, Duven & Wölfling, 2013). The same personality traits are negatively correlated with the use of social media (SMA) (Nazir Hawi, 2018; Błachnio, Przepiorka, Pantic, 2016; Tang et al. 2016). Some studies even focused on the correlations with specific social networks. In the case of Facebook, extraversion was positively correlated (Hawi et al., 2018; Wilson, Fornasier, White, 2010; Moore and Mcelroy 2012; Seidman 2013), while openness to experience was negatively correlated (Hawi et al., 2018; Andreassen, Griffiths, Gjertsen, Krossbakken, Kvam & Pallesen, 2013). Similar results were suggested by research studies aimed at the relationship between the type of communication technology, frequency of technology use, emotional profit, and personality characteristics (Big5). These studies confirmed that neurotic personalities were inclined to the use of smartphones or social networks. They were also more addicted to searching for various information. Moreover, growing conscientiousness decreased their need for searching for information and increased the use of other communication means, such as texts or emails (Zhitomirsky-Geffet, Blau, 2017).

Depression and its correlation with internet addiction

Depression has a negative effect on the emotional condition of an individual, which results in a negative effect on other mental functions (thinking, concentration, memory, motivation, volition) and somatic functions (nutrition, sleep, fatigue resistance, etc.) Depression is a significant risk factor for all mental disorders (Goetz et al., 2005). Currently, there are more cases of depression-related disorders, not only in adults but also in adolescents and even in children under the age of 13. Typical features include mood changes (irritability) or loss of enjoyment. Depression is also associated with cognitive and biological symptoms. Depression is one of the most common and serious mental disorders. The World Health Organization even ranks it among the most frequent causes of disablement. The prevalence of depression disorders has recently been increasing and it is estimated that this disorder affects as many as 7% of Europeans. In men the lifelong risk of occurrence is 5–12%, while in women the risk is twice as high and equals 10–25% (WHO, 2020, online).

The vast interest in the internet has had a huge impact on psychological research; in addition to understanding its role in the area of emotional conditions, there has been a growing interest in researching addictive conditions (Griffiths, Double, Orr & Dawson, 1998). According to some authors, there is a number of emotional factors that may be related to internet addiction in university students (Kandell, 1998). These factors include particularly depression, anxiety, and stress. Research on internet addiction and depression has shown that excessive use of the internet is also associated with an increase in depression frequency (Kraut, Kiesler, Boneva, Cummings, Helgeson & Crawford, 1998; Nie, Hillygus, Erbring, 2002). Excessive use of the internet disrupts the everyday life of an individual and people around. The individual is deprived of valuable time that could normally be spent with the family and friends. The whole problem results in fewer social relationships of the individual and a higher level of loneliness and stress. Sometimes this leads to disrupted relationships and social isolation (Nie et al., 2002). Further consequences of excessive use of the internet may include financial problems, but also neglect of academic, occupational and home responsibilities (Griffiths, 1995; McKenna, Bargh, 2000).

Method

The aim of the research paper is to evaluate the relationship between potential IA, personality traits, and self-esteem among pre-service and in-service teachers of Generation Y or Generation Z. The objective was defined by means of 3 research hypotheses, which were subsequently tested.

H1: In the sample of pre-service teachers of Generation Z there is a significant correlation between internet addiction and depression.

H2: In the sample of teachers of Generation Y there is a significant correlation between internet addiction and depression.

H3: The respondents of Generation Z are significantly more addicted to the internet compared with the respondents of Generation Y.

The research study was conducted between 01/2019 and 03/2019 and was designed as a quantitative survey. Data collection was performed in an electronic way using Google forms, which met the methodological and research criteria of online research relevance (e.g., high degree of security, archiving, and encoding during data transfer, access via generated password). The participants were 284 pre-service and in-service teachers. The age range of the research sample was 19 to 36 years, SD 3.81. The sample comprised pre-service teachers and in-service teachers completing their university education. The sorting criterion was affiliation to the generational cohort, i.e. Generation Z or Generation Y. Generation Z consisted of 96 respondents, while Generation Y included 188 respondents. Participation in the research study was voluntary and anonymity of the respondents during data collection was ensured.

Data collection was performed by means of the following methods:

The NEO five-factor personality inventory is a multidimensional inventory based on the five-factor personality model. The method examines the degree of individual differences and provides information on the five general personality dimensions. The inventory includes a total of 60 items (Hrebickova, Urbanek, 2001).

The Internet addiction test (IAT) -this twenty-item self-report questionnaire focuses on the characteristics and behaviours associated with compulsive use of the internet, including compulsiveness, escape from reality, and addiction. The questions are randomly ordered and each of them is assessed using a Likert scale. Using this scale, respondents indicate the degree of agreement or disagreement with each question. The scale ranges from 0 (least extreme behaviour) to 5 (most extreme behaviour). The Cronbach's alpha for the whole scale was 0.90 (Young, 2017).

Beck Depression Inventory-II is a psycho-diagnostic tool intended for identifying the presence and severity of depression symptoms. This tool consists of 21 items and the responses are indicated on a four-point scale 0-3. The items of the inventory relate to affective, cognitive, motivational, and physiological symptoms of depression corresponding with the symptoms specified in DSM-IV. The time frame for the responses is the last two weeks. This psycho- diagnostic tool is intended for persons aged 13 to 80 years. Regarding to reliability, the 21 items of the BDI-II demonstrated an overall Cronbach's alpha of .90. The Cronbach's alpha of the somatic-affective factor is .87, and that of the cognitive factor is .79 (Toledano-Toledano et al., 2018).

The sociodemographic questionnaire examines the demographic data such as age, gender, field of study, year of study, and questions relating to the use of social networks.

In the first stage, the data were transformed into an xls. format compatible with MS Excel 2013, which can easily handle data exported from the electronic questionnaire.

During the second stage, the data were formally and logically checked. Further data processing was performed using the STATISTICA programme, version 13. An analysis of results distribution confirmed normal data distribution; for this reason, a parametric statistical approach was selected, specifically descriptive statistics and Pearson correlation. The tests were conducted at a 5% level of significance.

Findings

Table 1. presents the results of the correlations between the variables in the whole sample of pre-service teachers of Generation Z and in-service teachers of Generation Y. The results suggest the existence of a significant positive correlation between internet addiction and neuroticism. In other words, the amount of time spent on the internet is associated with a higher level of anxiousness. A significant positive correlation was confirmed between internet addiction and depression. Individuals who show a higher level of internet addiction are also more depressed. The results revealed a significant negative correlation between age and neuroticism, internet addiction, and depression. In other words with decreasing age, the level of neuroticism, internet addiction, and depression increase.

Table 1. All Groups Correlations

	Generation=Y Correlations Marked correlations are significant at p < .05000 N=188							
Variable	Age	IA-sum	BDI-II	NEURO	EXTRA	OptEX	AGREE	CONS
Age	1.000	-.1360	-.1301	-.1427	.1158	-.0549	.0006	.0507
IA-sum	-.136	1.0000	.3479*	.1887*	.0067	.0078	-.0676	.0706
BDI-II	-.1301	.3479*	1.0000	.1228	-.0442	.0221	.0237	.0365
Neuroticism	-.1427	.1887*	.1228	1.0000	-.3530*	.1519*	-.2692*	-.1456*
Extraversion	.1158	.0067	-.0442	-.3530*	1.0000	-.0525	.1492*	.2650*
Openness to experience	-.0549	.0078	.0221	.1519*	-.0525	1.000	-.1189	-.1130
Agreeableness	.0006	-.0676	.0237	-.2692*	.1492*	-.1189	1.0000	.1301
Conscientiousness	.0507	.0706	.0365	-.1456*	.2650*	-.1130	.1301	1.000

Legend: * = p < .05 NEURO= neuroticism, EXTRA=extraversion, OptEX=openness to experience, AGREE=agreeableness, CONS=conscientiousness

Table 2. presents the results of the correlations between the variables in the sample of the pre-service teachers of Generation Z. The results did not suggest the existence of a significant correlation between internet addiction and any of the variables. In other words, the amount of time spent on the internet is associated with a higher level of anxiousness. A significant negative correlation was confirmed between age and neuroticism. The results did not confirm any significant correlations between depression and the measured variables.

Table 2. Generation Z Correlations

	Generation=Z Correlations Marked correlations are significant at p < .05000 N=96							
Variable	Age	IA-sum	BDI-II	NEURO	EXTRA	OptEX	AGREE	CONS
Age	1.000	-.0968	.0188	-.3094*	.1505	-.0315	.1841	.0482
IA-sum	-.0968	1.000	.1059	-.0233	-.0326	.0155	.0518	-.0849
BDI-II	.0188	.1059	1.000	-.0305	.1178	.0553	-.1734	.0062
Neuroticism	-.3094*	-.0233	-.0305	1.000	-.4135*	.2688*	-.4434*	-.1343
Extraversion	.1505	-.0326	.1178	-.4135*	1.000	.0728	.1165	.2253*
Openness to	-.0315	.0155	.0553	.2688*	.0728	1.000	-.4095*	-.2471*

experience								
Agreeableness	.1841	.0518	-.1734	-.4434*	.1165	-.4095*	1.000	.1543
Conscientiousness	.0482	-.0849	.0062	-.1343	.2253*	-.2471*	.1543	1.000

Legend: * = p < .05 NEURO= neuroticism, EXTRA=extraversion, OptEX=openness to experience, AGREE=agreeableness, CONS=conscientiousness

Table 3. presents the results of the correlations between the variables in the sample of pre-service teachers of Generation Y. The results are quite different compared with the results of Generation Z. A significant positive correlation was found between internet addiction and depression and neuroticism. It may be concluded that with increasing addiction to the internet the depression rate increases together with the feeling of anxiety and uneasiness. The results did not show any other significant correlations regarding age, internet addiction, or depression.

Table 3. Generation Y Correlations

All Groups Correlations Marked correlations are significant at p < .05000 N=284

Variable	Age	IA-sum	BDI-II	NEURO	EXTRA	OptEX	AGREE	CONS
Age	1.000	-.1353*	-.2097*	-.1518*	.1345*	-.0772	.0285	.0782
IA-sum	-.1353*	1.000	.2671*	.1378*	-.0113	.0147	-.0308	.0157
BDI-II	-.2097*	.2671*	1.000	.0853	-.0047	.0507	-.0641	.0049
Neuroticism	-.1518*	.1378*	.0853	1.000	-.3725*	.1889*	-.3209*	-.1457*
Extraversion	.1345*	-.0113	-.0047	-.3725*	1.000	-.0162	.1401*	.2563*
Openness to experience	-.0772	.0147	.0507	.1889*	-.0162	1.000	-.2265*	-.1653*
Agreeableness	.0285	-.0308	-.0641	-.3209*	.1401*	-.2265*	1.000	.1416*
Conscientiousness	.0782	.0157	.0049	-.1457*	.2563*	-.1653*	.1416*	1.000

Legend: * = p < .05 NEURO= neuroticism, EXTRA=extraversion, OptEX=openness to experience, AGREE=agreeableness, CONS=conscientiousness

Table 4. presents the results of the differences between Generation Y and Generation Z. The results did not reveal any significant differences in the monitored personality variables. The only significant difference was in the depression scale. According to the arithmetic means it may be concluded that Generation Z pre-service teachers show higher level of depression than Generation Y in-service teachers.

Table 4. Generation YZ differences

T-tests; Grouping: Generation YZ Group 1: Z Group 2: Y

Variable	Mean Z	Mean Y	t-value	df	p	Valid N Z	Valid N Y	SD Z	SD Y	F-ratio Variances	p Variances
IA-sum	34.979	33.745	1.099	282	0.273	96	188	8.099	9.362	1.337	0.114
BDI-II	12.92*	8.947*	4.133*	282*	0.000*	96*	188*	8.69*	7.078*	1.506*	0.018*
NEURO	27.927	26.622	1.198	282	0.232	96	188	7.372	9.276	1.583	0.013
EXTRA	29.719	30.973	-1.565	282	0.119	96	188	6.405	6.384	1.007	0.955
OptEX	26.833	26.064	1.198	282	0.232	96	188	5.184	5.089	1.038	0.820
AGREE	30.031	30.378	-0.645	282	0.520	96	188	4.569	4.132	1.228	0.247
CONS	31.115	32.069	-1.314	282	0.190	96	188	6.042	5.663	1.139	0.453

Legend: * = p < .05 NEURO= neuroticism, EXTRA=extraversion, OptEX=openness to experience, AGREE=agreeableness, CONS=conscientiousness

The results suggest that hypothesis H1 is rejected which means that the existence of a significant correlation between internet addiction and depression was not confirmed among members of Generation Z. Hypothesis H2 is accepted because the results suggested a significant positive correlation between internet addiction and depression among members of Generation Y.
As far as gender-specific differences are concerned, H3 is rejected because no differences were confirmed in the level of internet addiction between Generation Y and Z.

Results, Conclusions and Recommendations
Based on the results of the present study, the following conclusions can be made. The authors focused on the participants in terms of their belonging to a specific generation, because the system of undergraduate teacher training includes members of both Generation Z and Generation Y, the latter being mostly in-service teachers. It is useful to understand the features and expectations that each generation has. Identifying these characteristic features can be a facilitative condition in order to motivate and supervise them at work, in the case of the present study this applies to future teachers. Together with the rapid technological development, the attitude towards the educational process needs to be modified in accordance with the requirements of both time and the new generation of children. Generation Z wants everything to occur quickly and immediately because of the impact created by the advancement of technology; members of this generation are impatient just like Generation Y. Respondents from Generation Z have a short attention span but are capable of multitasking.

University students, unlike adults, show a lower self-regulatory ability (Akın, Arslan, Arslan, Uysal, & Sahranç, 2015) and are more likely to use the internet excessively (Kuss et al., 2014), which causes a higher risk of IAD in this population. For example, in 2015, the prevalence of IAD in a cohort of Chinese university students formed about 20% of the total student population worldwide (Li, Xu, Chai, Wang, Zhang, Xiang, 2018).

The results of the conducted research revealed a significant positive correlation between internet addiction and neuroticism in both groups of respondents. This finding is supported by other studies (Kayis et al., 2016). Personality traits can by evaluated as both protective and risk factors, in this respect the negative correlation between internet addiction and openness to experience, agreeableness, and conscientiousness is supported by other research findings in the literature. In this context, these traits might be seen as protective (Costa, McCrae, 1992; Radler et al., 2014, Li et al., 2018). The results of the statistical test of differences between Generation Z and Y did not suggest a statistically significant difference in the level of internet addiction between pre-service and in-service teachers. However, a statistically significant difference was observed in the depression scale. Pre-service teachers of Generation Z have a statistically significantly higher level of depression compared with pre-service teachers of Generation Y. An interesting fact is that no significant difference was observed in internet addiction by generations.
The results of the present study provide an interesting potential for further hypotheses, which will be subjected to further empirical examination.

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The Effect of Using Blog in English Course on Academic Success

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Abstract
The purpose of this study is to investigate the effect of using blogs on academic success in English lesson. Today, with the acceleration of contemporary learning and teaching theories, blogs, increasingly popular, have taken a place in the field of education. The activities carried out in the English lesson in this study were published through blogs. The sample of the study consists of 55 students (27: experiment group, 28: control group) in Sadreddin Konevi Anadolu Imam Hatip High School that is located in Yeşilyurt, Malatya, Turkey.
As a quantitative one, semi-experimental method with control group of pre-test and post-test was used. In this study, the data were collected by means of the academic achievement test on World Heritage Unit. During the experimental process, activities in the experimental group were published on blogs by the students, whereas the same activities were carried out with the existing methods in the control group. To investigate the effect of using blog on the academic succes, World Heritage Achievement Test developed by researchers was applied to both groups as pre-test and post-test. The data obtained from the research were analyzed by Jamovi statistical software. According to data, the difference between blog assisted learning and the effect of teaching suitable for existing programs on academic achievement is not statistically significant.
Keywords: English lesson, activities, blogs, academic success.

Introduction

Language, which is one of the most important elements providing communication between societies and people, is an important tool in sharing individuals' ideas and feelings. In addition to being a communication tool, language mirrors societies' lives and ways of thinking. While it provides progress in language, science and technology, it sheds light on history (Toklu, 2007, p. 13). It has become necessary to learn a second language in order to be able to follow scientific, artistic, commercial, social developments and changes and not to fall behind today's technology age. In our country, it is considered important for young people to learn at least one foreign language during their education. For this reason, as a compulsory subject, foreign language teaching has been included in the education system (Demirel, 2004, p. 3). English is the common language used by people whose mother tongue is different when communicating. This makes it necessary to learn English. Learning English is an important advantage in both personal and professional processes (Koçak, 2019). Since 2014, curricula have been updated to begin teaching English lessons in 2nd grade. This is an indicator of the importance given to foreign language teaching. Despite this importance, however, there are some problems in foreign language teaching. As Işık (2007, p. 5) states, considering the efforts and resources spent, the efficiency required in foreign language education cannot be obtained in Turkey.

It has been observed that parents and students find it necessary to learn English and give importance for learning it. However, 32% of students and 84% of parents had an initial or lower level of English proficiency (British Council & Economic Policy Research Foundation of Turkey, 2014). Moreover, the survey studies show that, as students move to higher grades, they are not able to make the same progress in English. Among the reasons for this situation, English can be studied and taught as a course to be passed, as in other courses. In foreign language teaching, students are mostly exposed to the target language in artificial classroom settings (Özüdoğru & Dilman, 2014). This reduces the students' relationship with the foreign language to the class hours.

Traditional foreign language teaching methods have begun to lose their influence with the proliferation of computers and the internet becoming a part of daily life. However, thanks to the opportunities provided by the technology, the interaction between the teacher and the students can be provided outside the class hours. As one of the applications of internet-based learning, which is a form of computer-aided teaching, blogs provide the ability to maintain, archive and re-access the communication between student-student and teacher-student outside the classroom environment (Yalın, 2008). Technology, allows the realization of meaningful learning outside class hours.

Traditional foreign language teaching methods have started to lose their influence with the proliferation of computers and the Internet becoming a part of daily life. This rapid change has saved the education and training process from adhering to time and place (Cennetkuşu, 2014). Compared to classical educational environments, new communication and information technologies provide important privileges in foreign language education. In foreign language education carried out through a network, the content presented becomes more attractive and meaningful by making use of multimedia components such as graphics, text and images. Students can participate in the virtual education environment at any time, share their homework and receive feedback in a short time (Kartal, 2001). In addition to being safe and flexible, computer assisted instruction provides the individual with the opportunity to progress at his own pace; it makes learning multidimensional with visual and audio materials (Şimşek, 2007).

As Seferoğlu (2006) stated, learning becomes more meaningful by using materials that appeal to both eyes and ears in teaching activities. This situation enables learners to gain resistance against forgetting. At the same time, it increases the level of motivation as it draws the attention of the student and arouses curiosity. Considering that the desired efficiency cannot be obtained in foreign language education, it can be said that the inclusion of blogs in the language teaching process will provide important advantages in terms of the mentioned aspects. The inclusion of computer-assisted language teaching within the scope of foreign language education is a result of the developments in learning psychology (Demirel, 2004, p. 22-23). Technology has become an integral part of today's students' lives. Teachers' attempts to teach something with the methods they have learned have become obsolete nowadays (Prensky, 2001). In this respect, utilizing blogs in teaching activities will appeal to today's students more. However, in a learning environment of his own, the student will feel more comfortable and be able to progress at their own learning pace. The student who is alone with him in the learning environment is not far from the supervision of the teacher (Vural, 2004, p. 202). Thanks to the ability to comment, blogs bring teachers and students together outside the classroom environment.

Blogs are easy-to-install and free web pages that allow individuals to exchange information on various topics, interact with other individuals and permanently store their memories, do not require technical knowledge for use (Blogger, 2020). John Barger first derived the word “weblog” by combining the words web and log in 1997 to name the articles he wrote on the internet. Later, this word started to be used as “blog” (Ip & Fun, 2005). Blogs, which can also be defined as “Web-Diary”, have become widespread by the end of the 1990s. The first blog sites were published under the titles “Live Journal, 1998”, “Open Diary, 1999” and “Blogger.com, 1999” (Tekinarslan, 2007). According to the research conducted by Sysomos company in 2010, 53.3% of the people who write blogs are between the ages of 21 and 35. According to the research conducted by Sysomos company in 2010, 53.3% of the people who write blogs are between the ages of 21 and 35. This is followed by people aged 20 and under with a rate of 20.2% (Özüdoğru, 2014, p. 38). Based on this data, it can be concluded that using a blog is especially preferred by the young generation. Blogs, one of the Web 2.0 technologies, can be easily used by teachers and students without requiring knowledge of coding (Çoklar, 2011).

According to Richardson (2010), the main feature that separates a blog from classical web pages is hidden in its content. Rather than being a heap of content like on web pages, blogs connect with readers with questions, comments, ideas and links, with the ability to be updated almost daily. The use of blogs in foreign language education enables developing writing skills, sharing pictures, videos, online reading texts and providing feedback. Students can create a common class blog, post their assignments and activities on their individual blogs, share with more people, and interact more in the target language. Creating a blog page is an easy process for students. For example, when an e-mail account is created, a blog page can be created by following the necessary steps through many different blog applications (Günday, 2015). A blog can be created in as little as 5 minutes.

Blogs can be classified into different types according to their intended use in the field of education. According to Poling (2005, p.12-15) blogs used for educational purposes can be grouped under 4 categories: 1. Individual blogs, 2. Class blogs, 3. Collaborative blogs 4. Staff Development Blogs. Campbell (2003) lists the use of blogs in education under three main headings: 1. tutor blog, 2. class blog, and 3. learner blog. Blogs, which seem technologically simple system, cover a wide area in the web world. Another classification regarding the use of blogs in the educational process was made by Weller, Pegler and Mason (2005, pp. 63-64) as follows: 1. Group blogs, 2. Academics keeping blogs, 3. Students using blogs.

Foreign language teaching technologies have been affected by the innovations and changes of the current era, as in other teaching fields. The process, which started with written technologies, proceeded towards auditory (radio, tape, teleconference, etc.), audiovisual (television, CD, DVD, etc.) and computer-based technologies (projector, smart board, tablet) respectively. Internet-based applications in foreign language education come to the forefront today through computer-based technologies (Sarıçoban & Balaman, 2012). Foreign language teachers who use internet technologies in the learning-teaching process encourage autonomy by enabling students to take their own learning responsibilities (Savaşkan, 2019). Applications using computer technologies in foreign language teaching can be grouped under three headings (Sarıçoban & Balaman, 2012): 1. Computer assisted language learning, 2. Internet-based language learning, 3. Blended learning.

Enriching foreign language teaching with technology is one of the most important indicators of the transition from behavioral school to constructivist understanding as well as making great contributions in developing four skills (writing, reading, listening, speaking). The best way to learn the language that is a living being is interaction (Wang, 2005). It can be said that computer and internet technologies make important contributions to this process by eliminating the distances.

On the other side, Using a blog as a lesson tool can also have some difficulties for teachers and students. Although it is easy for teachers and students to access computers and the Internet in school today, some students may not have the same opportunity at home. According to Önal and İbili (2016), in order to avoid inequality of opportunity in such a situation, the teacher should consider the students' access to the internet and the computer before assigning an assignment on blogs.

This research is an experimental study that examines the effect of blog usage on academic success in English class. Considering the difficulties in learning English in our country, the use of blogs in foreign language education as a relatively new breath is thought to be important in terms of filling the gaps in the related literature and supporting the existing findings.

When studies on the use of blogs in teaching English as a foreign language are examined, it is seen that these studies are mostly done at the undergraduate level (Bener, 2015; Huang, 2016; Özkan & Bada, 2012; Yang, 2009). In most of the studies (Aydan, 2014; Dehneliler, 2013; Farooq, Fatima & Javid, 2015; Sulistyo, Mukminatien, Cahyono & Saukah, 2019; Temir, 2015; Üzer, 2016; Karsak, Fer & Orhan, 2014; Arifeen & Billah, 2018; Çakıroğlu, 2013; Koç & Koç, 2016; Özdemir, 2015) about undergraduate level, it is seen that the effect of using blog as a teaching tool on a skill in English such as reading or writing is investigated.

In the literature, there are also studies where blogs are used as web-based portfolios (Chuang, 2008; Çalışkan, 2013; Jun, 2012; Karsak, 2019). In the study conducted by Çalışkan (2013), the effects of blogs on the academic success of mathematics course were investigated; In the study conducted by Gündoğdu and Korucu (2018), the effects of blogs on information technology and academic success of the software course were investigated. However, there is no study investigating the effect of blog usage on academic achievement within the context of high school level English course in the domestic and foreign literature review. From this perspective, researching how using blogs will affect high-school students' academic success in English course is important in terms of its originality. If blogs, which are free and easy web tools, are found to be successful, they have a widespread effect as they are available in all schools across the country. This also adds importance to the study. Along with the confirmation of other scientific studies that the use of blog increases academic success, a curriculum that includes the use of blogs can be created under the leadership of decision makers. A curriculum to be created in this way is a candidate to contribute to the academic success of students, but also indicates that this study has a potential contribution to the curriculum. A curriculum, in which the findings of these and similar studies are taken into consideration, seems to be a candidate to ensure that students use technology in a systematic and planned manner in the education-teaching dimension as in other areas of their lives.

In this study, an answer was sought for the question "What is the effect of using blog on students' academic success in English lessons?"
For this purpose, the following measurable sub-problems were created and the data of the research were collected accordingly:
a. Do traditional methods affect academic success in English course?
b. Does blog-supported teaching affect academic success in English course?
c. Is there a significant difference posttest scores of the experimental and control groups?

Method

In this study, quantitative research method was used. The research design is a semi-experimental pattern with pretest and posttest control groups. In experimental studies, it is tried to understand the effect of the change in independent variables on dependent variables. In semi-experimental studies, the researcher works with two separate groups that are not randomly appointed (Can, 2014). The pretest and posttest data used in the study were obtained through the English Academic Achievement Test.
The implementation phase of the research started on the 28th of February 2019, when the academic achievement test was applied to the experimental and control groups as a pre-test. On May 25, the month ended with the application of the test as a post-test. During this period, students in the experimental group published their activities on their personal blog pages. The students in the control group handed over the same assignments to the teacher. The works delivered at the end of each activity were scored by the teacher. The study group consisted of 55 students who attended the ninth grade in a high school in Yeşilyurt district of Malatya province in the spring semester of 2018-19.

Table 1: Gender of working group

		Gender			
	Number of	Female		Male	
Group	students	f	%	f	%
Experimental	27	12	44,4	15	55,5
Control	28	13	46,4	15	53,5
Toplam	55	25		30	

As seen in Table 2, a total of 55 students, 27 from the experimental group and 28 from the control group, participated in the study. 12 (44.4%) of the students in the experimental group are girls and 15 (55.5%) are boys. In the control group, 13 (46.4%) of the students are girls and 15 (53.5%) are boys. In order to test the equivalence of the experimental and control groups, the pre-test results of the students were compared with the Mann-Whitney U Test.

Table 2: Mann-Whitney U Test on Pretest scores of experimental and control groups

		N	Mean Rank	Sum of Ranks	U	Z	p
Pre-test	Experimental	27	28,96	782,00	352,00	,441	,659
	Control	28	27,07	758,00			

Total	55

As a result of the Mann Whitney U test performed to compare the academic achievement pre-test scores of the experimental and control groups, no statistically significant difference was observed between the groups (U = 352,00 p>, 05). According to this data, it is seen that there is no difference between the experimental and control groups in terms of academic success of the English course.

In this study, students studying in the ninth grade prepare a blog within the scope of the English course. The study was carried out in the second semester of the 2018-2019 academic year. Five events in the World Heritage unit of the 9th grade English course book were selected to be published on blogs. After each of the students created a blog, a class whatssapp group with all the experimental group students was established under the teacher administration and the students were asked to report on this channel after publishing their activities. Thus, students were informed about each other's work instantly. The researchers informed the students by preparing content on technical topics such as inserting text, uploading pictures and videos in order to create a blog page in the class group they previously created. The links of each blog created by 27 students were published on the class blog, allowing students to easily find each other's blogs. There is a class blog created for the experimental group in Figure 1a and an example activity published in the blog of a student in the experiment group in Figure 1b:

Figure 1a. *Experimental group class blog*

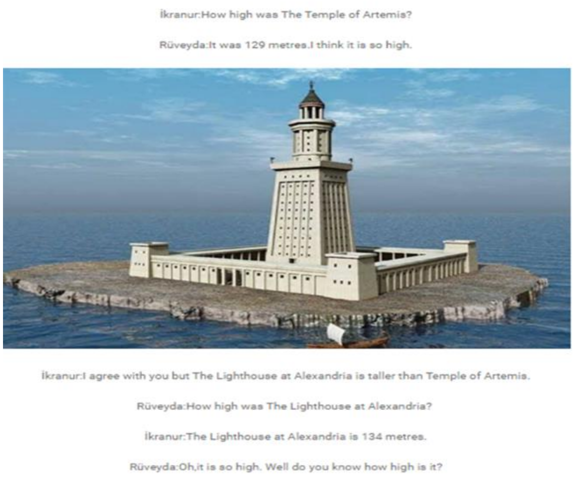

Figure 1b. *A section from an activity posted by one of the students in the experimental group on his/her blog*

The same activities were carried out as paper pen assignments, as in the example activity shown in Picture 5 in the control group.

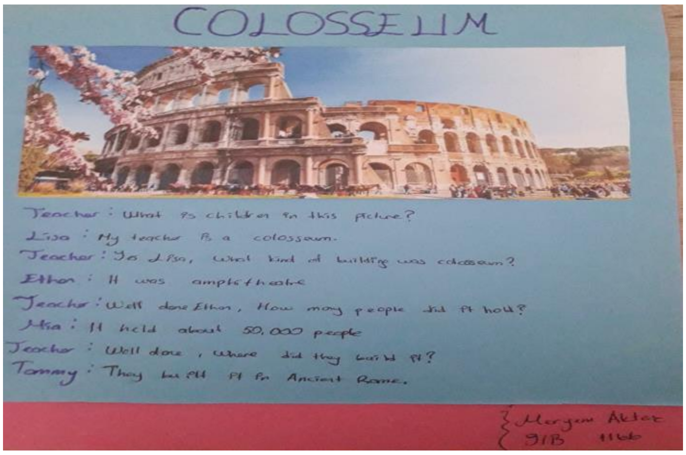

Figure 2. Sample of activity in the control group

Two weeks after the end of the experimental study, which lasted for five weeks, post-test data were collected and analyzes were performed. The academic achievement test developed by the researchers was used as a pre-test before the experimental process. The same test was used to collect posttest data after the experimental procedure. Some of the features of the academic achievement test are listed below.

Name: World Heritage Unit Success Test: 25 items, Average difficulty: 0.55; Average discrimination: 0.50, KR-20 reliability coefficient: 0.82. These data show that it is a reliable test with moderate difficulty and high discrimination (Nunnaly & Bernstein, 1994).

The analysis of the collected data was done through Jamovi. In this study, the normality of the data was tested with the help of Shapiro-Wilk test. Data suitable for normal distribution are determined by parametric tests; non-normally distributed data were analyzed by non-parametric tests. The difference between the academic achievement pre-test and post-test scores of both experimental and control groups were analyzed by paired samples t-test. The difference between the academic achievement posttest scores of the experimental and control groups was examined with the Mann-Whitney U test. In addition, effect sizes were calculated by using Cohen's d formulas for t tests.

Findings

As a result of the analyzes made to answer the sub-problem whether the methods applied in the control group have an effect on academic achievement, the data showed a normal distribution. As a result of the analyzes made to answer the sub-problem whether the methods applied in the control group have an effect on academic achievement, the data showed a normal distribution.

Table 3: Paired Samples t-test on Pre-post test scores of working groups' scores

		N	$\overline{X}$	SD	df	t	p
Control	Pretest	28	31,42	13,71	27	4,363	,000*
	Posttest	28	43,28	21,41			

Depending on the paired samples t-test result of the control group, a statistically significant difference was observed between the pretest ($\overline{X}$ = 31.42)and the posttest ($\overline{X}$ = 43.28) scores of the control group [t (27) = 4.363, p <,05]. Cohen's d calculated as the result of the test was found to be 0.824. This value shows that the current method applied in the control group has a great influence on academic achievement. According to this result, current teaching has a significant effect on students' academic success. The findings of the studies carried out by Altunkaya, Ateş and Doğan (2018) and Temir (2015) support the findings of this study.

As a result of the analyzes made to answer the sub-problem whether using blog have an effect on academic achievement, the data showed a normal distribution. As a result of the analyzes made to answer the sub-problem whether the methods applied in the experimental group have an effect on academic achievement, the data showed a normal distribution.

Table 4: Paired Samples t-test on Pre-post test scores of working groups' scores

		N	$\bar{X}$	SD	df	t	p
Experimental	Pretest	27	35,55	19,2	26	4,27	,001*
	Post test	27	44,29	19,8			

*: p<.05

Depending on the paired samples t-test result of the experimental group, a statistically significant difference was observed between the pretest ($\bar{X} = 35.55$) and the posttest ($\bar{X} = 44.29$) scores of the experimental group [t (26) = 4.27, p <.05]. Cohen's d calculated as the result of the test was found to be 0.824. This value shows that the current method applied in the control group has a great influence on academic achievement. According to this result, using blogs has a significant effect on students' academic success. This finding is similar to the findings of experimental studies conducted by Farooq et al. (2015) and Temir (2015).

As a result of the normality analyzes conducted in order to compare the academic achievement posttest scores of the experimental and control groups, the distribution was not normal and it was decided to use Mann Whitney U test that is one of the non-parametric tests.

Table 5: Mann Whitney U test results regarding academic achievement posttest scores of experiment and control groups

		N	Mean Rank.	Sum of Rank.	U	Z	p
Post Test	Experimental	27	27,89	753,00	375,00	,051	,960
	Control	28	28,11	787,00			
	Total	67					

According to the results of Mann Whitney U test conducted to compare the academic achievement posttest scores of the experimental group and the control group, no statistically significant difference was observed between the achievements of the groups (U = 375,00, p>, 05). Although this result is similar to the study conducted by Çalışkan (2013), it is not compatible with the results obtained by Ghorbandordinejad & Aref (2016) and Karsak, Fer & Orhan (2014).

Results, Conclusions and Recommendations

A significant difference was found between the pre-test and post-test scores of the control group, in which content was presented in accordance with the current education programs, in favor of the post-test. This shows that the current methods have an impact on the academic success in English lesson. There was a significant difference between the pretest and posttest scores of the experimental group in favor of the posttest. This shows that the use of blogs in English lessons has an impact on English academic success. No statistically significant difference was found between the posttest scores of the experimental and control groups. According to this result, the difference between blog assisted learning and the effect of teaching suitable for existing programs on academic achievement is not statistically significant.

In accordance with the results obtained, recommendations for practitioners and researchers are presented below.

- It can be argued that the use of blogs on the subject of World Heritage will increase academic success.

- Students may be asked to present and store their works through blogs that they can use as a portfolio.
- Instructors can create a class blog and upload useful content about the lesson here.
- The same study can be repeated on different working groups (province, district, school type, class level).
- The opinions of teachers and students about using blogs in English lessons can be investigated.

Plagiarism Rate = 9.8%

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Possibilities of Graphic Representations in the Education of People with Visual Impairment Theory and Practice

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Abstract
Graphic representations accompany us at every step, supplementing written and verbal modes of information transfer, and at the same time broadening our overview of the world around us, and helping us to create ideas and utilise our imagination. This article deals with graphic representations for the needs of blind people and people with severe visual impairments. For these groups, graphic representations fulfil the same task as for people without visual impairment, but it is more difficult to create these representations. However, we will show in the article that although the work is more complex, it is also more varied, and can additionally be utilised for the needs of people without visual impairments as well. This probe into graphic representations for the visually impaired will be followed by a presentation of a survey in the given area. Thanks to new technologies, graphic representations have become not only financially but also physically accessible. Our probe will focus on the perception of tactile graphics in both the narrower and broader meanings, as well as on the most common imaging techniques in the creation of maps (in the Czech Republic).

In the first part of the article, we would like to take an excursion into the field of graphic representations for people with severe visual impairments - from the simpler ones (thermo-vacuum printing) to the more complex ones (3D printing in various materials). Our article will highlight individual representatives of each of the interesting and current graphic representations, as well as point out possible shortcomings of the representations of others. The creation of the article was supported by the projects - / TL01000507 - Development of independent movement through tactile-auditory means / TL03000679 - Information deficit reduction and the development of imagination of persons with visual impairments through 3D models with auditory elements, IGA_PdF_2020_007
Keywords: People with visual impairment, tactile graphics, tactile maps, educational practises.

Introduction

Art has accompanied us at every step since prehistoric times. In the past, art was often the privilege of individuals who wanted to communicate and pass on information; later art was used to make life more pleasant or to create reminders of interesting and emotionally coloured moments. At present, we encounter fine art not only in the field of aesthetics, but in all areas of life - graphics, infographics, etc. It informs us, entertains us, makes our lives more pleasant and beautiful, but also warns us or discourages us from certain activities. However, much of the art used for these purposes is not accessible for individuals with severe visual impairments, and therefore beginning in the 20th century, a group of techniques designed specifically for the needs of this minority began to be developed. We call these techniques tactile graphics. In the lines below, we would like to take a closer look at this area - we will introduce the techniques that are currently used for art / graphic representation for people with severe visual impairments.

Method

The text below is therefore not in the classic research format, but is rather a comprehensive overview in the field of tactile graphics for people with severe visual impairments. Jesenský (1988, p. 34) specified relief graphics as "graphic representations made by the blind or for the needs of the blind by the technique of relief lines or very low relief areas". At present, we do not deviate completely from the statement, but at the same time, we add that the current concept of relief graphics includes a wider range of users and is understood much more broadly, especially in terms of the resulting products. It can be considered that the main goal of relief graphics intended for people with visual impairment is to streamline the development of fantasy, but also to further refine and consolidate ideas about the real (or fantasy world) and the possibility of artistic expression of their emotions and ideas. Tactile graphics for people with severe visual impairments thus represent one of the adequate and completely relevant options for overcoming or mitigating the information deficit of people with severe visual impairments, and among other things they become an effective tool for the self-expression of a person with severe visual impairments.

Stejskalová (in Finková, Regec, Růžičková, Stejskalová, 2012), adds to the above definition that for tactile graphics a typical representation of three-dimensional objects, through lines or surfaces that can be perceived by touch. Jesenský (1988, p. 35) further notes in this definition: “With the relief form of drawing, tactile graphics for people with severe visual impairments become a means of expression and a carrier of information, which is located on the border of graphic (but also painting) and sculptural techniques and is approaching relief - one of the most original art and informational techniques used by mankind since ancient times."

Relief graphics become a mediator of information from the environment for people with severe visual impairments, helping to perform a compensating function to reduce the information gap. Relief graphics then perform the following functions in people with severe visual impairments (according to Růžičková, Kroupová, 2020): Informative functions, Compensation function, Activation function, Educational functions, Diagnostic function, Aesthetic function.

Findings

Here we can see, the tasks and goals for the usage of tactile graphics are very broad and it depends on the individual himself and his teacher or instructor or parent, which of the above functions is crucial for the period and which function is preferred, since no single object can always fulfil all functions.

Principles of creating tactile graphics for people with severe visual impairments

In order for tactile graphics to fulfil some or even all of the above-mentioned functions, it is necessary to respect the basic principles for their creation, which will respect and preserve the character of the original work. Along with the gradually changing paradigms of relief graphics, the principles and characteristics pertaining to their creation are also changing.

Stejskalová (in Finková, Regec, Růžičková, Stejskalová, 2012) specifies that the following principles must be respected when creating relief graphics for people with visual impairment:

- The principle of laconicism – consists of the elimination of those details of the displayed object which are insignificant, do not carry essential information or do not have a key function.
- The principle of generalisation and unification – the form of tactile rendering should be rationally generalised. When using symbols, we adhere to standard unified marks, symbols, etc.
- The principle of accentuation via tactile sensitivity – we emphasize the details that are of essential informational importance in terms of tactile sensation.
- The principle of separation and isolation – relatively separate parts should be shown so that they are sufficiently clearly separated from other parts.

- The principle of highlighting the structure – the key elements should be sufficiently emphasised, thus achieving the emphasis on the structure of the physically represented object.
- The principle of phasing – in the case of information about processes, the tactile display must be sufficiently characteristic in terms of individual phases or stages of the process.
- The principle of using unified associations, stereotypes, and mnemonics – haptic rendering should use means that create a natural relationship between the symbol and reality or evoke a stereotypical response to the tactile stimulus used.

Červenka (1999) defined principles which complement the above-mentioned principles and specify more detailed requirements for relief imaging. Although they are specified mainly in the context of creating models, relief plans and relief schemes, they can be generalised to extend to all areas of tactile graphics intended for people with severe visual impairments. These principles include:

- The principle of contrast.
- The principle of durability.
- The principle of surface slipperiness.
- The principle of health and safety.

The above-mentioned principles and principles of creating relief objects point to the relative complexity of these objects and the complexity of their implementation so that they are satisfactory in terms of the psychology and physiology of tactile perception in order to meet the needs of people with visual impairment. However, these objects have great informational potential and fulfil compensatory functions in the activities of everyday life for people with visual impairment.

Current techniques of tactile graphic creation for people with visual impairment

Jesenský (1988) presents seven main technologies for creating tactile images, which can be combined and supplemented in various ways, and although the division dates from 1988, it is still valid; we have added one further option at the end:

- manual technology for creating an embossed image (engraving or extrusion into a soft pad - wax, plasticine - or into a foil laid on a soft pad; further heating, application or e.g. embroidery embossing),
- machine-mechanical technologies (embossing milling, discharging the embossing line, pressing, processing of textiles and other materials),
- electromechanical embossing line in soft pads (by means of an embossing device),
- electronic raster image formation (haptic electronic or tactile graphic display),
- chemical image formation (etching of the image on metal plates, screen printing with foamable inks and plastisols, thermochemical technologies – e.g. the creation of relief graphics using swell paper and a ZyFuse Heater,,
- thermo-vacuum embossing on plastic foils,
- creation of a relief image using modular parts, mosaics, pre-printed marks, pictograms, etc.
- We can currently add to the above list the already widespread technology of 3D printing using 3D printers, which utilise various materials for the final product - from gypsum through plastic filaments to printing by compressing paper, etc.
- The most accessible, simplest, and historically oldest way of creating tactile graphics is drawing on the palm of the hand. "It is a non-permanent technology, the advantage of which is the immediate perception of the drawing now of its creation. If it is supplemented by a verbal comment, the correctness of perception can be verified immediately. In the community of persons with visual disabilities it is a very widespread and common means of communication." (Voženílek et al. 2010, p. 27).

Manual and machine techniques for creating relief graphics for people with visual impairment
Below we would like to focus on classical techniques for the creation of tactile graphics, grouped by manual or machine technologies.

The manual possibilities of creating embossed graphics include those techniques that we can create ourselves without major difficulties and demands on equipment; some of these techniques can be used by people with severe visual impairments. With the help of these manual techniques for the creation of tactile graphics, it is possible to create both relatively simple representations or objects, as well as more complex representations in terms of the requirements for their creation, and potentially complex requirements regarding individual imagination and tactile suitability,. We can use the following tools and resources to manually create embossed graphics: Contouring paste
Bonding of materials, Modelling, Drawing.

Drawing aids are those tools which people with visual impairment use to make their own creations. Considering the most well-known drawing aids, we will choose a pin, plasticine, foil and felt drawing to discuss in more detail.

Pin drawing
A pin drawing consists of a board with pre-drilled holes and pins (metal or wooden), which are inserted into these holes. In this way, more or less complex shapes can be created. Simple templates include, for example, a ladder, a fence, a house, etc. The pin drawing is one of the preparatory aids for practicing working with a six-point cell as learners begin to work with Braille.

Foil drawing
A foil drawing is made using a soft pad and a foil into which the picture is engraved. A certain modification of the foil drawing is the creation of relief on harder paper, under which a dense plastic net is placed (e.g. an insect net or screen for windows). There are tactile negative relief elements on the final product, however, the positive relief is especially tactile.

Felt drawing
"When working with a felt drawing, a child attaches laces of various lengths, strengths, structures to a felt pad and thus creates a representation" (Ludíková, 2004, p. 49).

Plasticine drawing
Another tool suitable for use with preschool children is a plasticine drawing - its principle is the creation of relief into a plasticine base. In the first phase, the child creates prints of objects, in the next phase, he scribbles freely in the formula until he deliberately carves horizontal and vertical lines (Ludíková, 2004).

Machine techniques for creating embossed graphics
Among the machine techniques for creating embossed graphics, we list those that are relatively affordable and have become more widespread among organisations providing services to the visually impaired in different age ranges.

Thermal Embossing Printers - ZyFuser / P.I.A.F.
Both the ZyFuse heater and P.I.A.F. (Picture In A Flash tactile graphic maker) work on the principle of heating a special swell (microcapsule) paper, in which the black print rises above the surface of the paper and thus creates a tactile image. The image can be drawn on the paper with a special marker, copied or printed. Better tactility is

achieved when the line or image contains graphite, which absorbs heat and thus increases the tactile readability of the resulting graphic.

Braille printers

Braille was and is one of the first techniques for creating relief graphics. Some Braille printers (Everest) can currently print not only text, but also simple images according to the original. This is a display using discontinuous (point) graphics, where printed points create line or contour views. The individual points have a significantly smaller distance than in the standard Braille characters. The printed dots can even have different heights above the base plane of the paper and different shapes. In the same way, however, we can use a combination of dots to create images on a Picht Braille typewriter.

Extrusion into various materials

One of the technologies that is used less often today is the technology of printed cardboard. It is based on the solidification of damp cardboard with a high cellulose content onto a metal matrix under pressure. A similar technology is used with pressed plastic, where the foils are formed by means of thermo-vacuum printing (a vacuum is created between the plastic matrix and the carrier film, and at a higher temperature the carrier film is formed according to the matrix).

Another option is printed sheet metal, thanks to which this type of relief graphics is intended for public exhibition. The disadvantages can often be sharp edges and protrusions and the relative unpleasantness of tactile sensation when in contact with metal. A common variation of this technology is the use of bronze plates. This technology is applied in tactile art graphics. used in the creation of maps and plans located, for example, on observation decks (cf. Voženílek et al., 2010; Finková, Regec, Růžičková, Stejskalová, 2012, Kroupová, 2017).

At the turn of the millennium, printers using the technology of spraying dots formed by fast-setting material sprayed by nozzles also entered the commercial sphere.

3D printers - 3D printing

With the greater availability of 3D printers and their more affordable price point, , the possibility of their use by the general public has expanded, and their use is not limited to the educational sphere. Currently, 3D printing options are differentiated according to the coating technology used by the printer. The most common are FDM / FFF (Fused Deposition Modelling / Fused Filament Fabrication) SLA (stereolithography) printers. FDM / FFF technology is by far the most widespread and simplest 3D printing technology and it is used by virtually all low-cost 3D printers. As the English name suggests, such a printer produces an object by melting a special material in a nozzle, which then places the heated soft mass in the form of a thin thread on a printing plate. The object we want to create is first processed by special software, which cuts the selected object into hundreds of thin layers, which the nozzle will gradually assemble one after the other using a molten thread. Since the melt dries almost immediately and holds its shape, practically anything can be produced in individual layers in this way.

Today, the most widely used production material is the environmentally friendly plastic PLA (polylactic acid), which the print head melts at a temperature of about 200 ° C, and the relatively widespread industrial plastic ABS (acrylonitrile butadiene styrene), which is (due to its higher melting point) more heat-resistant. Consequently it is easier to drill into such a product, because it does not just soften by friction. On the other hand, PLA adheres more easily to the printing plate and does not peel off.

Other advanced technologies include SLA (stereolithography) and, among the most expensive choices, EBM / EBAM (Electron Beam Additive Manufacturing) technologies, which use a laser or other energy source to melt a fine metal powder such as titanium. Again, it is printed in layers, but the resulting material may already have properties similar to a foundry casting.

3D printers are currently used for the needs of people with severe visual impairments as a means to print simple objects or images, but also plans, maps or models of objects.

Practical applications of relief graphics

From theoretical points of view, we are now moving to the pragmatic levels of the very application of relief publication across the activities of everyday life.

Relief graphics in orientation and mobility training and public space

Independent movement and orientation in space are only due to the presumed independence and self-sufficiency of a visually impaired individual. Relief or haptic elements with all integrated elements of public space - public roads, public spaces or buildings can people with visual impairment help to better orientation. There are tactile plans or maps, haptic markings of sidewalks and paths, markings in the elevator or on the railing, etc. Other relief elements that we may encounter more and more often in recent years are sculptures. These are usually intended for the intact public, but thanks to their tactile graphic, they can also carry aesthetic information for the people with visual impairment.

Relief graphics in tactile mapping

Another example of the practical application of relief graphics is the creation of tactile maps and plans. "Tyflocartography is a special branch of cartography dealing with the creation of maps, plans or globes specially made for perception through touch. While classical cartography strives for maximum detail in the drawing, typhlocartography must simplify the drawn objects as much as possible in order to be recognizable by touch in the relief drawing. Maps made for the purpose of the visually impaired are generally referred to as tactile maps or also as typhlomaps. Both of these terms are mutually substitutable and used in Czech, Slovak and Polish professional literature. In the Anglo-Saxon environment, the terms tactile and tactile maps are used ”(Voženílek et al., 2010, p. 21).

The most widespread form of tactile maps are tactile plans of a small area located in a public space. They are usually located at important tourist destinations, in shopping centres, offices or hospitals, etc.), or in places that visually impaired people frequently visit (organizations for the visually impaired and their surrounding area).
Currently, three-dimensional printing on 3D printers is coming to the forefront of interest in tactile mapping, especially in terms of the effectiveness of information transfer and economic accessibility. "3D printing, also known as 'rapid prototyping', is a form of additive production. The process is performed using a 3D printer, which, according to the instructions created on the computer from the 3D model, applies the material layer by layer to exactly the given positions on the building board. Today, there are a number of technologies falling under 3D printing that differ in speed, accuracy, the material used and its properties, print color, price, etc.” (Brus et al. in Barvíř, 2017).

Current research and development at the academic level seeks to standardise and develop tactile mapping in the context of current technological progress, which would ensure a high user standard and increase the quality of the spatial orientation and independent movement of visually impaired people, and potentially the overall quality of life of visually impaired individuals. However, Barvíř (2017, p. 18) notes that “Czech typhlomaps are currently not fully compatible with world standards and do not use the potential of available modern technologies. So far, there is no standardization of tactile maps in the Czech Republic, which significantly reduces the chances of development and application of these maps. "

Relief graphics in the education of the visually impaired

Tactile graphics are of undeniable importance in reducing the information deficit, they are a mediator of aesthetic experience, they enable the development of an individual's haptic abilities of an individual. At a specific level, tactile graphics play a role in the development of touch as a significant compensatory factor and a means of overall development of the personality of a visually impaired child. Tactile graphics are of undeniable importance, especially in the field of the development of cognitive functions, specifically in the context of the imagination - the purpose of their use is to support the formation of complex ideas, as comprehensive as possible, about the surrounding world. As part of practicing reading skills and creating tactile graphics, we can present various types of tactile images to the child. "A good foundation in reading tactile graphical images from the preschool period can significantly help as a student learns to read, because if a child can use relief illustrations, learning is not only more interesting for him, but also easier and more effective. For pupils with severe visual impairments, it is appropriate that textbooks and teaching materials are always supplemented with tactile images, whether they are illustrations, graphs, tables, or diagrams, because if pupils do not work with them systematically in primary school, they usually have problems with their usability in secondary school and then also at university, where their position can be severely disadvantaged" (Finková, Ludíková, Růžičková, 2007, p. 132).

Relief graphics in art

In the broadest sense, artistic creation can become a mediator of self-assertion, self-realisation and inclusion in the socio-cultural environment of the majority society. In this context, art overcomes prejudices and stereotypes that resonate in the sense of the unavailability of art and its independent creation by visually impaired people. Thanks to its aesthetic function, art becomes a link between the majority of intact artists and the community of artists with disabilities.

"The artistic work of authors with disabilities has often been interpreted as primitive art in the past. The phenomenon of primitivism and its artistic application in the history of art in the twentieth century thus raised the question of the potential of artistic creation of people with disabilities and the way of artistic categorization of their creation. Awareness of primitivism as a source of inspiration in European art was key to initiating a change in attitudes towards people with disabilities as authors of remarkable authentic works. The so-called African or Oceanic art, folk art, or works of children and people with disabilities, which we often call 'primitive,' have a number of characteristics in common that can appeal to the viewer. It can be intense expressiveness, clarity of structure and composition or straightforward technical simplicity of creation" (Sochor, 2015, p. 129). In this context, emphasizes authors (Vondráková, Růžičková, 2018; Vozenilek, Vondrakova, 2012, 2014; Vondráková, Růžičková, 2018; Růžičková, Kroupová, Vondráková, 2018; Růžičková, Kroupová, 2020) that the images of beginning blind artists are raw, although often charming. When talking about 'primitive' art, we can also encounter the notion of disability art, which is "characterized as a direction of artistic representation, whose important defining characteristic is a critical confrontation (usually by irony, parody, bricolage and other techniques and strategies of deconstruction) with normative regulations. Another feature is characterized by the effort to capture experience based on the confrontation of normality and abnormality. The perspective of this artistic direction lies in the conceptualization of disability as a society produced by alterity and difference. Disability art is historically based and still exists in close connection with the community of the disabled" (Kolářová in Sochor, 2015, p. 140). Theconcept of foreignness in disability art emphasizes the difference between the term and depiction of 'disability in the arts'. Disability art is primarily a representation of the work of the work of people with disabilities in art, not just art containing themes of disability. The concept of a new artistic direction of disability art is connected primarily with the issue of exclusion and marginalization of disability in contemporary society "(Sochor, 2015, p. 140). The work of artists with disabilities and artists who work in communities of people with disabilities is also placed in the context of the so-called 'crip' culture or other works, in the creation of which the authors themselves place various restrictions. The problematic view of the "normal", "functional" body is targeted with the help of various art forms (Sochor, 2015). An example of "disability in the arts" can be the use of Braille in art - on ceramic and glass vessels, but also under leather (or suede), paintings, sculptures, jewelry, etc.

People with severe visual impairments, including blind individuals, should be acquainted with all available art techniques in the educational process, even though they will usually not be able to actively use them in their own creative activities. Perhaps the technique most frequently associated with the artistic creation of visually impaired people is tactile modelling, with Axman's modelling technique being the best-known.

The text above has outlined the basic possibilities of creating relief graphics for the needs of visually impaired people, both in education and in their everyday life. In this framework, some common examples of practical applications of relief graphics in the everyday life of individuals with severe visual impairment were included, from relief elements in spatial orientation and independent movement through tactile graphics and tactile maps, to the use of relief graphics in art and education. The common denominator of all the mentioned technologies and methods of creating relief graphics is their contribution to the minimization of the information deficit of visually impaired people, as well as the possibility of aesthetic expression or self-expression.

Results, Conclusions and Recommendations

Relief graphics in a number of different forms are now an integral part of the lives of visually impaired individuals. This was not always the case – in the 1990's and 2000's, relief graphics were not given the attention they deserved, given their various functions and important role in the lives of the visually impaired. This lack of interest has been further reflected in the current absence of relevant studies and relatively outdated standards and parameters. With the changing needs of society, the specific needs of visually impaired people are also changing; there continues to be an emphasis on overcoming the information deficit, which today's information society is addressing at many different levels. One way to overcome this information deficit is to use embossed graphics for the visually impaired. Its application potential is easily rooted at a practical level, especially in the field of spatial orientation and independent movement, specifically in the form of facilitating spatial imagination through maps and plans. These are currently taking many forms, depending on modern technologies for creating relief images. In the last decade, with the expanding possibilities of 3D printing, this technology has come to the forefront in the field of creating relief graphics for people with visual impairment.

***Plagiarism Rate:* 5 %**

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Tactile Graphics in the Tertiary Education of Students with Visual Impairment

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Abstract
Tactile graphics intended for people with visual impairment are an important supporting element in reducing the information deficit caused by impaired visual perception. Due to the fact that we visually obtain the maximum amount of information in a minimum period of time, it is necessary to replace this missing information in various ways. One of these ways may be via tactile images, more precisely, tactile graphics. Not only the informational contribution of tactile graphics, but also their important role in the development of the imagination of visually impaired people has been confirmed by the results of our research. Particularly in the area of spatial orientation and independent movement, tactile graphics have a significant potential for application. We will follow up on this information with a study with a mixed design, the aim of which is to identify specific possibilities and possible limits to the use of relief graphics in tertiary education. Based on the implemented qualitatively oriented research with quantitative elements, we will attempt to comprehensively evaluate the contribution of relief graphics in the education of visually impaired students at universities in the Czech Republic. We will focus on issues of information usefulness, equalization of study opportunities, technical and imaging opportunities and other aspects. This contribution was created with funding from projects IGA_PdF_2020_007 Adaptation of the environment for people with disabilities; TL01000507 Development of spatial orientation and independent movement through auditory-tactile means; TL03000679 Information deficit reduction and the development of imagination of persons with visual impairment through 3D models with auditory elements.
Keywords: Visual impairment, tactile graphics, tertiary education

Introduction

"The mission of every university is to help build a democratic, open, tolerant, cohesive, educated and cultural society." (Long-term Plan – Dlouhodobý záměr vzdělávací a vědecké, výzkumné, vývojové a inovační, umělecké a další tvůrčí činnosti pro oblast vysokých škol na období 2016 – 2020, available from: http://www.vzdelavani2020.cz/images_obsah/dokumenty/strategie/dz-vs-2016-2020.pdf). One tool for achieving equal access to education and achieving adequate study comfort for disadvantaged groups of students should be, inter alia, the inclusion of requirements for counseling and support for specific groups of students in the standards for institutional accreditation. Schools seeking to acquire institutional accreditation must, in addition to undergoing other quality assurance processes, demonstrate a functioning student advice and support system. (Dlouhodobý záměr vzdělávací a vědecké, výzkumné, vývojové a inovační, umělecké a další tvůrčí činnosti pro oblast vysokých škol na období 2016 – 2020, available from: http://www.vzdelavani2020.cz/images_obsah/dokumenty/strategie/dz-vs-2016-2020.pdf).

According to the EDF (European Disability Forum), people with disabilities have half the probability of achieving a tertiary level of education, in comparison to the intact population. In the Czech Republic, in 2018 only 18.7% of persons with disabilities had achieved higher professional or university education (Available from: https://www.czso.cz/documents/). The National Plan for the Promotion of Equal Opportunities for Persons with Disabilities for the period 2015-2020 declares that "In the field of higher education, equal opportunities for persons with disabilities will be supported by financing the increased costs of universities, making education accessible to people with special needs, project funding, and the inclusion of accessibility requirements for academic programs which meet the standards for institutional accreditation."

In connection with the above-mentioned ideas, the availability of counseling services for students with special needs at all public universities in the Czech Republic has significantly increased in the last decade. The current network of counseling centers at the tertiary level of education in the Czech Republic includes 20 support centers as integral parts of public universities (Available from: https://www.asociacevsp.cz/vs-poradny-vf/).

People with visual impairment are one of the relatively abundant minorities of students at Czech universities. One of the specifics that define this community is the limited supply of information from the environment caused by the loss or significant reduction of visual perception. Tactile graphics thus become one of the means and intermediaries that can partially reduce the aforementioned information deficit and to some extent compensate for absent visual information. Tactile graphics is a term representing both the concept and discipline, where the subject of interest is graphic relief images made for the needs of people with visual impairment, or by people with visual impairment themselves, both in a two-dimensional and a three-dimensional forms that are perceptible by touch.

The main goal of tactile graphics can be considered to streamline the development of imagination, but also to further refine and consolidate ideas about the real (or fantasy) world, as well as to serve as a vector of artistic expression foremotions and ideas (Růžičková, 2017). Tactile graphics thus represent one of the adequate and completely relevant possibilities of overcoming or mitigating the information deficit of people with severe visual impairment. Partial reduction of the information deficit, specifically, compensation for absent visual information, can significantly support understanding and streamline the acquisition of new knowledge, even at the tertiary level of education. Relief information can, among other things, contribute to the alignment of information and its systematic arrangement or the understanding of the relationships between the part and the whole. It thus becomes a tool of illustration and a facilitating element in the imagination. The most strikingly applied tactile graphics are used in the area of spatial orientation and independent movement of visually impaired people in the form of 3D maps, which are currently connected with the auditory footprint (Vondráková, 2016; Vondráková, Růžičková, Barvíř, 2018; Vondráková, Růžičková, 2018).

Tactile graphics can perform several functions in documents, including study materials:

- aesthetic (to make the content more attractive),
- illustrative (to make the content more comprehensible),
- structuring (to describe relations),
- informative (to bring new information),
- social (to enable discussion about the content).

When transforming the image accompaniment in documents into a tactile form, it is necessary to respect key principles so that the resulting tactile image corresponds to the physiology and psychology of tactile perception:

- Enlarging the picture and reducing the amount of detail (the level of redundancy depends on the purpose of the presentation);
- Discrimination of the lines and surfaces by test sheet (max. 4 lines, 3–4 surfaces/patterns);
- Distance between 2 lines if they should be detected as 2 lines is min. 5 mm;
- Space between line of the chart and its surrounding (including the axis and other intersections);
- Space between the braille description and its surrounding min. 3–4 mm (usage of the abbreviations); substitution of braille description for sound interpretation (depending on technology) is possible

(Červenka, Hanousková, Másilko, Nečas, 2013).

Relief depictions used in tertiary education can include several types of presentations:

- charts and graphs (pie chart, bar graph, line chart),
- maps,
- drawing with perspective (using 3D models, transforming perspective to 2D),
- orientation plans, heraldry,
- schemes or diagrams,
- 2D curves (i. e. logarithmic and exponential functions, trigonometric functions),
- electronic circuits

(Červenka, Hanousková, Másilko, Nečas, 2013).

As part of the services provided to students with visual impairment, the vast majority of support centers at universities also offer the adaptation of visual materials to tactile form. The technologies which are used to create embossed graphics most often include:

Relief printing on theat sensitive microcapsule paper, also called “swell” paper

- Thermal vacuum printing
- Braille dot relief graphics
- Three-dimensional tactile graphics
- Manual technology for creating embossed graphics

Domestic research focused on the role and application potential of relief graphics in the lives of people with visual impairment (Kroupová, Růžičková, 2020, in press) has demonstrated its undeniable informational value, both in spatial orientation and in the development of cognitive functions, specifically spatial imagination.

Tactile graphics in tertiary education - empirical study

The aim of the research is to create a relatively comprehensive picture of the current situation in the field of relief graphics for the aims of tertiary education.

Utilizing a mixed research design, we have attempted to comprehensively analyze and describe the current situation in the field of tactile graphics created specifically for the needs of university students with visual impairment.

We have determined the following research questions:

1. What is the demand for the creation of relief graphics in tertiary education?
2. What is the usability of relief graphics in tertiary education?
3. What are the most common characteristics of relief graphics intended for students with visual impairment at universities?
4. Do university support centers have adequate technical equipment for creating embossed graphics?
5. Is the use of relief graphics a common part of tertiary education?

Method

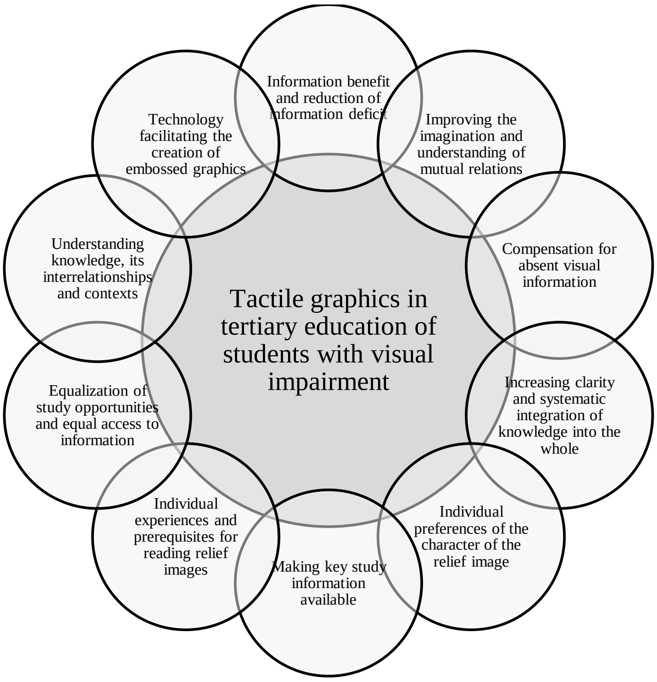
The mixed design of the research was carried out through a structured group interview and a survey using a questionnaire. The primary research group, whose participants were participants in a group interview, was saturated on the basis of intentional selection, while the selection criterion was active participation in the counseling sphere in tertiary education with a focus on students with visual impairment. The secondary research group consisted of other experts working in the field of support for university students with visual impairment, while the main criterion for their selection was direct participation in the creation of relief graphics for the needs of students with visual impairment at the university level.

The primary research group consisted of 3 participants working within the Center for Support of Students with Special Needs who actively provide tactile graphic services for the needs of students with visual impairment. The secondary research group was saturated with experts from other counseling centers at universities across the Czech Republic and numbered 6 respondents. The group structured interview, conducted with participants from the primary research group, served as a primary probe into the chosen thematic focus, which helped to improve the quality of the questionnaire intended for the secondary research group.

Respondents from the secondary research group were administered an electronic questionnaire constructed from open items with space for free association and from closed questions using a rating scale. As part of the analysis of the obtained data, methods of sorting and creating meaningful categories were used in the qualitative part of the survey, and illustrative methods of displaying data in the form of tables and graphs were used for quantitative data. Due to the insufficient saturation of the secondary research set, it was not possible to test the data statistically, so the interpretation has a descriptive character of a qualitative nature. A series of questions were asked in order to provide free association space for the most authentic answers possible - regarding these, we will not go beyond the bounds of simple description in their analysis and interpretation.

The group interview was transcribed into text, for which a first-order reduction was performed. The data were further sorted by the method of data clustering and creating meaningful categories. The result of the analysis is the schema below, which illustrates the most frequently mentioned aspects of the creation and application of relief graphics in the tertiary education of students with visual impairment.

Figure 1. Significant categories identified in the analysis of a group interview with participants working in the field of counseling for people with visual impairment at universities



The following is an analysis and interpretation of quantitative data. Due to the low saturation of the research set, it was not possible to test the data statistically, so only illustrative imaging methods are used.

The socio-demographic structure of the secondary group (workers in the field of support for university students with visual impairment) is illustrated by the following three tables.

Table 1. Length of practice in the field of support for university students with visual impairment

Practice length	**relative frequency**	**absolute frequency (in%)**
less than 5 years	3	50,0
5 – 10 years	2	33,3
more than 10 years	1	16,7

Table 2. Field of study

Field of study	**relative frequency**	**absolute frequency (in %)**
special pedagogy with a focus on people with visual impairment	2	33,3
special pedagogy with a different focus	1	16,7
Other	3	50,0

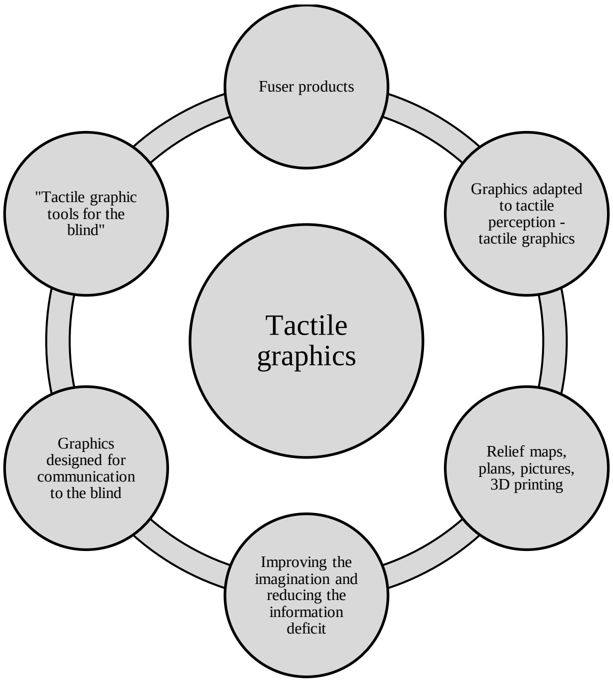
Table 3. Extension of qualification (completion of training / courses) in the field of relief graphics

Extension of qualification	**relative frequency**	**absolute frequency (in %)**

through course / training		
yes	3	50,0
no	3	50,0

The following scheme is a reflection of the responses collected in the space for free association, which was given to the respondents in order to probe their thoughts regarding the concept of relief graphics. The individual associations illustrate general as well as very specific aspects of the creation and use of relief graphics in tertiary education.

Figure 2. Associations connected with the concept of relief graphics



The following set of tables reflects the experience, needs and problems in the creation of relief graphics for the needs of university students with visual impairment.

Table 4. The relief information of greatest importance in tertiary education

The most important relief information in tertiary education	"Tactile charts, maps, and generally things that are difficult to describe verbally. Because it's often the only sensible way to express such information. "
	Information that cannot otherwise be passed on to the student or that would have to be described inefficiently and at length.
	On the one hand, key information is complementary, such as a tactile display that complements a digital book. On the other hand, information replacing the visual path of perception, such as Braille.
	Haptic maps, because they would serve to orientate at the buildings for individual departments.
	Relief plans of the environment enabling relatively independent orientation and also visually inaccessible information enabling understanding of knowledge, mutual relationships and contexts.

	Model, 2D printing, 3D printing

Table 5. The greatest potential of relief graphics in the context of tertiary education

The greatest potential of tactile graphics	Wherever there are graphs, maps, or various drawings in the curriculum. It can be understood as a complement to the digitization service.
	Haptic maps and plans - the space of the university and individual departments, including university facilities (colleges and their surroundings, canteens) and other key elements in a separate orientation (way from the station).
	As part of the admission procedure, studies and exams, i.e. for the entire period of study. However, primarily in teaching and in individual subjects, where relief depictions are key to understanding the curriculum (geography, history, technical and natural sciences, artistic disciplines).
	In the field of 3D printing, enabling an increase in clarity and an increase in information benefits.

Table 6. The most striking absence of relief information in tertiary education

Absence of relief information	When entering university buildings - a plan for basic orientation in the building. Orientation plans of key buildings, orientation elements in the environment.
	Braille labels, their unification and portability of execution. 3D printing, for example, can be used instead of currently used dymo [embossing] tape labels. The obstacle is financial demands.
	Absence of relief information in public space. There is a lack of more frequent practical use (haptic maps and plans of not only university facilities).

Table 7. The most frequently used technologies for creating relief graphics

Creation technology	**relative frequency**	**absolute frequency (in %)**
Manual technology (punching, furrowing, cutting, gluing, contouring paints)	0	0
Fuser printing (microcapsule paper)	6	100,0
3D printing	1	16,7
Braille printing	4	66,7

Table 8. The most frequently requested types of relief imaging

Types of relief imaging	**relative frequency**	**absolute frequency (in %)**	**Comment**
maps / plans	2	25,0	"It varies according to how many students there are in which specialization. So it's different every year. Most generally I would say
display of historical elements	2	25,0	
Images in study materials	2	25,0	
graphs / schemata	2	25,0	

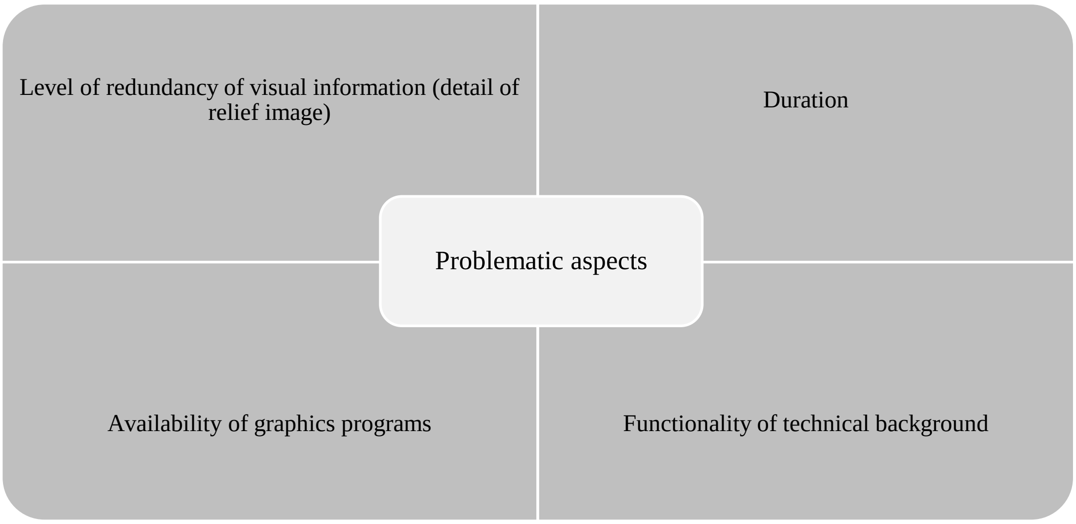
			schemats / graphs, lately also a lot of historical elements. Then regardless of the specialization they are maps / plans. "

The answer to the frequency of demand for relief graphics is non-specific - 50% of respondents believe that it is frequent; the same percentage of respondents would categorize the demand as “rare”.. The situation is very individual with regard to the structure of study specializations, the experience and preferences of the students with visual impairment themselves, the time availability of support center services and the experience of support center staff at universities. Relief graphics are most often requested by students of the social sciences (83.3%), in 16.7% of responses, students of the natural sciences were also mentioned. Here a general tendency to study the humanities is evident; in the case of people with visual impairment, the humanities remain one of the available and really applicable study options. According to the respondents of the secondary research group, the greatest difficulties in the use of relief graphics lie in the insufficient level of development of imagination and tactile perception (33.3%). Marginally, (16.7%) anatomical-functional obstacles in tactile perception and lack of haptic information in the environment were also mentioned. 83.3% of respondents fully agree with the premise that relief graphics help to clarify and improve ideas. The vast majority of respondents (66.7%) also largely disagree with the thesis that there are enough relief elements within the university buildings and the university campus. This tendency was also reflected in previous research, when respondents noted the lack of relief elements in public space. The same percentage of respondents distinctly disagreed with the statement that students with visual impairment use relief graphics often, almost daily. Here we can again mention the individual needs of users in their goals regarding their study specialization, their subjective experience and prerequisites for reading relief graphics, and, just as importantly, the material and technical background and time constraints of the university counseling workplace. 66.7% of respondents identified relief graphics as an important source of information. The same proportion of the respondents consider relief graphics to be an important means of compensating for the information deficit. Finally, almost 67% of respondents consider relief graphics to be one of the means to ensure the equalization of study opportunities and to increase the study comfort of students with visual impairment as they acquire new knowledge. From the outlined aspects, the indisputable informational benefit of relief graphics in the field of tertiary education of students with visual impairment is clear.

Table 9. Specific examples of the implementation of relief graphics for the needs of students with visual impairment

Various charts; coats of arms (heraldry - history); drawings of the brain and neurons (psychology); a map of the campus and the areas around some university buildings; graphs and diagrams for entrance exams. "The biggest challenge for everything was to deal with the complexity of the template so that the creation could be used to retrieve information and at the same time there was no large loss of information from this template."
Shields and other historical depictions - “The level of redundancy is problematic, it is also difficult to distinguish colors and facial expressions. The low quality of the original is also a problem with these historical displays. "
"In the entrance tests were display graphs and tables in relief form. The problem was in the graphs, where the points had different shapes and at the same time overlapped."
"The images on the fuser are made quickly, but of course the durability is lower than, for example, in 3D printing. On the contrary, 3D printing is not usable everywhere, it is not realistic to need to create 400 images / models for an object on a 3D printer. It therefore depends on the purpose of using the relief image. Braille printing can also be used, but it will be extruded earlier, and it is not suitable for many images. The biggest difficulty of all the mentioned ways is the time and preparation of the template, often also in the graphic program."
Implementing the map using a fuser ("it was challenging, but it worked")
Tools for the subject of heraldry, sphragistics, numismatics
Graphs, schemata, functions within the statistics curriculum

Figure 3. Problematic aspects in the creation of relief graphics for the needs of students with visual impairment



Findings

Through a research study with mixed design, we obtained a relatively comprehensive picture of the issue of relief graphics in the conditions of tertiary education. The results of the study show that relief graphics are requested with varying frequency within the services of support centers. Although almost all of the addressed support centers offer the service of creating embossed graphics, the frequency with which this service is used varies depending on the structure of study programs, the material and technical equipment of the center, and time constraints for the fulfilment of the order. It also varies due to the purely individual experience, assumptions and preferences of each student with visual impairment. Even in tertiary education, relief graphics play an important role as a carrier of information, a mediator of compensation for the information deficit caused by the reduction or loss of visual perception, and as a facilitating element in improving the imagination. From the obtained data of qualitative and quantitative character, the indisputable informational benefit of relief graphics is also evident in the field of tertiary education of students with visual impairment. Relief graphics can be considered as one of the means to ensure the equalization of study opportunities and increase study comfort in the acquisition of new knowledge by students with visual impairment.

The requested relief images most often have the character of schemata, graphs, maps, and plans, but also can be historical elements or pictorial accompaniments to scripts and other study materials specific to a student's specialization. Relief graphics are in most cases requested by students of social sciences as well as natural sciences. The human orientation of the study represents a general tendency; in the case of people with visual impairment, the preference for social sciences is completely understandable and reflects the limits based on the loss or limitation of visual perception.

The fact that almost all the contacted support centers for students with special needs offer the creation of relief graphics as an integral part of services for students with visual impairment can be considered to be a positive. With the development of material and technical conditions and an increase in their financial availability, the technical background of support centers has been expanded, and they now have several technologies for the creation of relief images.

Thermal printing using a fuser (microcapsule printing) is the most frequently used; 3D printing has become more widespread, and braille printing of relief graphics is also traditionally used. Exceptionally, thermal vacuum printing technology is also available in larger centers. Currently, as a rule, the problem is no longer financial inaccessibility or technical complexity, but rather the time aspect in terms of the complexity of the implementation of orders for the needs of individual students. Thus, the demand is usually adequately met, given the increased demands on the staff of the centers and their time constraints. At the practical level of the creation of relief imaging, determining the level of redundancy seems to be problematic, depending on the purpose of the relief drawing and supporting information with regard to the study focus. The possibility of mutual sharing of experiences and consultations between individual counselors at university centers can be considered positive.

Making available key study information which is of a visual nature, puts the principle of reducing and compensating for the information deficit into practice, and this is reflected in various areas of study. Overall, based on the obtained data, we can reach the conclusion that relief graphics are an integral part of tertiary education in the Czech Republic and that their use allows for the partial equalization of study opportunities, increased study comfort and equal access to information for the needs of students with visual impairment.

Conclusions

Tactile graphics intended for people with visual impairment are an important supporting element in reducing the information deficit caused by impaired visual perception. Due to the fact that we visually obtain the maximum amount of information in a minimum period of time, it is necessary to replace this missing information in various ways. One of these ways may be via tactile graphics. Not only the informational contribution of tactile graphics, but also its important role in the development of the imagination of people with visual impairment was confirmed by the results of our research. The presented study, with a mixed design, was focused on issues of information usefulness, equalization of study opportunities, technical and imaging opportunities and other aspects related to the usage of tactile graphics in tertiary education. Based on the implemented qualitatively-oriented research with quantitative elements, to the direction of our further research will be to attempt to comprehensively evaluate the contribution of tactile graphics for the education of students with visual impairment at universities in the Czech Republic.

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Plagiarism Rate: 10 %

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The research and study of the international financial reporting standards implementations in educational institutions

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Abstract

The main purpose of this publication is to consider the foreign political situation in the Republic of Azerbaijan in the context of economic crisis, as this point remains as an important issue of integration into the global financial markets. The place and role of the country in the global economic space, the process of joining the World Trade Organization, and interaction with international financial institutions remain relevant. According to some political analysts, Azerbaijan urgently needs to diversify its markets and strengthen relations with partner countries. The actual task of researching the universal tools for assessing economic indicators around the world is reporting, prepared in accordance with international financial reporting standards. The article considers the analysis of the prerequisites and stages of the transition to IFRS, characterizes the results of applying IFRS generally in the world and Azerbaijan in particular. The advantages and disadvantages of applying IFRS are formulated further in the article. Particular attention is paid to the need to monitor the effectiveness of the implementation of IFRS in Azerbaijan. Scientific articles, monographs and other information of domestic and foreign economists on the problems of accounting, economic analysis and fundamentals of the theory and methodology of auditing, normative, methodological and methodical materials were used like the theoretical basis of the study.The practical significance of the study for the purpose of effective global cooperation remains the transition to IFRS, by which, according to established practice, it is customary to understand the unified accounting standards recognized around the world. The practical significance of the study can play a positive role in enriching the scientific and practical knowledge of experts involved in accounting and reporting. Continuous professional development, development of new knowledge and skills becomes objectively necessary.Based on the analysis, it can be argued that, in general, the international experience in using IFRS is positive, in countries which use IFRS, there is an influx of foreign investment, but it is impossible to say that the reason for this inflow is the only application of IFRS. The inconsistency of the experience of implementing IFRS does not allow us to assess the impact of the introduction on the economy of Azerbaijan in general and its entities in particular. It should be noted that it is important to organize constant monitoring of the effect of the implementation of IFRS for certain sectors of the economy and Azerbaijan as a whole.

Keywords: Educational institutions, international financial reporting standards, stages and effectiveness of IFRS implementation, features of IFRS implementation

Introduction

IFRS reporting, focused primarily on the needs of investors, was originally based on ensuring the protection of their interests by presenting reliable data on financial statements and the property status of the organization. Nowadays, relying on many years of work experience on the formation and improvement of IFRS rules based on an analysis of international practice allows us to recognize the presumption of IFRS quality as rules that allow the formation of reliable reporting. It is this presumption that serves as the basis for the introduction of IFRS in the accounting of Azerbaijan. The process of transition to IFRS began in 2004 and was designed to attract additional investment in our country. Assessment of effectiveness of the implementation of IFRS for Azerbaijan is very important as well as for all countries adopted IFRS. World experience shows that the characteristics that determine the usefulness of information are achieved by using IFRS directly or by using them as the basis for building a national accounting and reporting system (И.А.Лисовская, М.И.Сидорова., 2013)

In international practice, accounting rules are called accounting principles, and this is reflected in IFRS. The existing rules, principles (assumptions and requirements) in accounting require their mandatory implementation. The first step towards harmonization of US GAAP and IFRS was made in October 2002 when the FASB and the IASB together issued an agreement, known as the "Norwalk Agreement," formally recognizing convergence as an avowed goal of these two standard-setters (Hopkins, et al., 2008). Since then, the process has been started for reducing differences between the US GAAP and IFRS, by means of several convergence projects undertaken by FASB and IASB (RamMohan R. Yallapragada, C. William Roe, Alfred G. Toma., 2013).

The principles, rules and requirements of accounting should be examined in a unified manner. Each of the principles, rules and requirements complements the overall accounting system. In this regard, such an interaction is compared to the principle of the "Eiffel Tower". All the supports of the tower as a whole carry the total power of the device. Thus, the principles and requirements of accounting create a single system as a whole, and its components do not contradict each other. Therefore, failure to comply with various accounting principles, rules and requirements without sufficient justification can be interpreted as improper accounting and unsatisfactory organization of accounting.

At the same time, due to the insufficient regulatory framework for financial accounting in the Republic in the current time, the implementation of these requirements is associated with some difficulties.

This does not mean that the organization has no right to deviate from the existing rules and requirements in any case. In real life, it is possible that the organization may prefer other assumptions. For example, the principle of continuity cannot be applied when an accounting policy is established in the period in which the entity is liquidated. At the same time, such situations are an exception to the general rule.

Literature review

Scientific articles, monographs and other information of domestic and foreign economists on the problems of accounting, economic analysis and normative, methodological and methodical materials were the theoretical basis of the study.

The practical significance of the study can play a positive role in enriching the scientific and practical knowledge of experts involved in accounting and reporting. Continuous professional development, development of new knowledge and skills becomes objectively necessary. The practical significance of the study can play a positive role in enriching the scientific and practical knowledge of experts involved in accounting and reporting.

The prerequisites for the development and implementation of IFRS in the world were largely associated with the economic crisis of 1929-1933. The collapse of 1929 on world stock markets, which generated a long-term global economic crisis in industrialized countries and regions, determined the insufficiency of the applied accounting and financial reporting system. Already in the early 1930s. in the United States began to develop a system of nationally recognized accounting standards (GAAP) and reporting, which were voluntarily used by large companies listed on stock exchanges. Based on these standards, over time, the US GAAP system came into existence, which has survived to this day. Now the US Federal Securities Commission requires the use of GAAP by all large companies listed on US stock exchanges.

Nationally recognized accounting standards that originated in the United States are common in Mexico, Canada, England, Italy, and other countries. The development of IFRS problems began in 1960 sponsored by the United Nations Center for Transnational Corporations. In the early 1960s, speaking at the UN General Assembly, US President John F. Kennedy drew the attention of the world community to the development of global economic relations arising from transnational corporations. The UN Center for Transnational Corporations has begun direct work on IFRS. Later, in 1973, a Committee on International Financial Reporting Standards (IFRS Committee) was established in London. The committee of these countries includes the USA, Canada, Australia, France, Ireland, the Netherlands, Mexico, the UK, Germany and Japan.

All professional organizations - members of the International Federation of Accountants since 1983 became members of the IFRS Committee. The purpose of the IFRS Committee is to unify the accounting principles used by companies around the world to prepare financial statements. Until 1989, the Committee worked to compile accounting practices in 10 countries. As a result, a document was issued in the form of a set of rules and explanations called "International Accounting Standards". The formation of IFRS in its modern form is considered to be 1989–1995. In these years, more countries are joining 10 countries (Cyprus, Singapore, Malaysia). Another reason for the emergence of IFRS is being approved - the need to introduce a specific mechanism that would help attract foreign investment.

1995–2000 - the emergence of key sets of IFRS. Close collaboration begins with reputable international organizations. European countries are implementing IFRS at the legislative level, although national standards continue to play a primary role.

Since 2000, the convergence of international and national standards began, which led to the globalization of financial standards. The Committee on International Standards was reformed: its functions were transferred to the Council (IASB), and the Council eventually became part of the IASCF Committee Fund. The trustees of this Fund are only 22 people.

In Azerbaijan, the prerequisite for the introduction of IFRS was the transition from a planned economy to a market economy, which took place in the 90s. XX century. The core of accounting reform at the government level has identified international financial reporting standards. But the process of reforming the national accounting system did not keep pace with the general process of economic reforms in Azerbaijan:

- ✓ So, you can show the decree that laid the foundation for the development of accounting and the construction of a financial reporting system, signed by the President of the Republic of Azerbaijan on September 2, 2004, the Law on Accounting;
- ✓ February 7, 2005 "on the application of the Law on Accounting";
- ✓ Organized work on the translation of IFRSs according to the version of 2019 into the Azerbaijan language, as well as the approval of these translations as official texts in the Fund of the Committee on International Accounting Standards;
- ✓ Translated comments of standing committee for comments;
- ✓ Translated the International Code of Ethics for Professional Accountants (in combination with international standards of independence) 2018 edition;
- ✓ A compilation of international standards on quality control, audit, analysis, other approved and related services 2016-2017, part 1, volume 1
- ✓ A program for transition to IFRS for entities of public interest was developed and approved.
- ✓ Rules for the provision of financial statements were developed and approved, and the reporting period for commercial, budgetary, non-governmental and municipal organizations was approved;
- ✓ On June 1, 2018, The Law of the Republic of Azerbaijan "On Amendments to the Law of the Republic of Azerbaijan On Accounting" entered into force.

Major changes to the law can be classified into several categories. According to the amendments, enterprises are divided into 4 groups - micro, small, medium and large businesses. The criteria for the above groups are determined by the Cabinet of Ministers. Accounting standards for enterprises also differ by these criteria.

New accounting rules have been established, and accounting organizations are required to comply with these rules. According to the new rules, the chief accountant must be involved in the business, and senior accountants must be professionals in large legal entities, budget organizations and legal entities that publish annual financial statements or consolidated financial statements. IFRS for small and medium-sized enterprises and International Public Sector Accounting Standards were translated into Azerbaijani by the Ministry of Finance and entered into force from the date of publication of the official texts. National financial reporting standards and accounting policies have been repealed from this date.

It should be noted that the Ministry of Taxes of the Republic of Azerbaijan will also study the above requirements during state financial control and tax audits. Lack of financial reporting in accordance with the requirements will result in administrative liability. Responsibility will be borne by the head of the accounting entity, chief accountant or legal entity, or an individual providing accounting services (Seago, W. Eugene., 2018).

It should be noted that, today the majority of public Azerbaijani companies are already reporting under IFRS. Their actions are explained either by the presence of a foreign investor, or by the need to attract external financing through the initial issue of shares (IPO, Initial Public Offering), by issuing bonds, or by the desire to receive a consolidation tool for the financial statements of the holding, as well as by their interest in raising a positive image. In recent years, the number of business entities reporting under IFRS in Azerbaijan has been steadily increasing.

Today, all credit organizations, insurance companies, socially significant commercial organizations, budgetary, non-governmental and municipal organizations compile their reports in accordance with International Financial Reporting Standards, The International Public Sector Accounting Standards and National Standards based on them.

The development of accounting and reporting is not possible without improving education in the field of accounting (Kraus, Kalle, et al.,2015). We recommend to pay special attention to the following in the training of personnel in the field we study:

- ✓ In-depth study of the concepts that form the basis of IFRS;
- ✓ the formation of skills in the active use of information collected in accounting for the management of business entities and the implementation of the effectiveness of joint management;
- ✓ instill skills in the application of such information processing methods as discounting, mathematical calculations based on probabilities, mathematical statistics;
- ✓ the formation of a process of a deep understanding of professional ethics;
- ✓ Formation of a new approach to the application of standards and other regulatory legal acts in the field of accounting and reporting.

Stages of formation of IFRS in some countries of the world

Let us dwell in more detail on the world experience in using IFRS – according to January 2013, more than 120 countries require or permit the application of IFRS. Further, based on the information from the IFRS Foundation website (https://www.ifrs.org/), we will provide a brief overview of the application of IFRS in some countries (table 01).

Table 01, Application of IFRS in some countries of the world.

Country	IFRS is mandatory for reporting all private sector enterprises and as a basis for reporting public sector enterprises since 2005.
Australia	IFRS is mandatory as part of the procedures for their adoption and implementation in the European Union since 2005.
United Kingdom	IFRS is mandatory as part of the procedures for their adoption and implementation in the European Union since 2005.
Germany	Since 2005, all EU member states must apply the IFRS that have been adopted in the EU for listed companies
The European Union	IFRS is mandatory as part of the procedures for their adoption and implementation in the European Union since 2005.
Italy	IFRS is mandatory as part of the procedures for their adoption and implementation in the European Union since 2005.
France	IFRS allowed since 2010 for some international companies
Japan	IFRS is mandatory for reporting all private sector enterprises and as a basis for reporting public sector enterprises since 2005.
Canada	IFRS has been mandatory since 2011 for listed companies, their application is allowed for private sector companies, including non-profit organizations
Russia	Since 2012, IFRS is mandatory for listed companies, banks, insurance companies and in the preparation of consolidated financial statements for other reasons.
USA	Since 2007 IFRS allowed for foreign issuers

China	National standards developed that substantially coincide with

https://www.ifrs.org/

To be more accurate, accounting is not just about what is happening in the enterprise. It is about what will happen in the next year (minimum) in real terms. Thus, accounting fulfills its forecasting function. Finally, there is a completely new modification of the processing of economic information in accounting, which is subject to traditional but significant changes:

Creative accounting - is a completely new concept and in many cases is interpreted as creative accounting. The roots of this "creativity" go back centuries, and over the years such creativity has been perceived as distortion of accounting records. Nowadays, creative accounting is a direct result of the existing accounting policy and draws a line under its negative side. For example, if a person breaks the general rules, it was previously thought that he was doing it for ugly purposes. Nowadays, we should not think badly of people, we should avoid blaming them. Based on this principle, the accountant becomes the creator and constructor of truth. Finally, what the accountant used to do for ugly purposes is now done for the benefit of society and the state.

Social accounting is not an independent form of accountability like creative accounting. It is understood as expanding the boundaries of traditional accounting. Such an expansion is embodied in two directions. The first and more important is related to meeting the ever-increasing needs of users. The second focus is on accounting for environmental and social costs. In fact, the general idea is that accountants calculate the cost of the finished product from the point of view of their enterprise. However, an indicator that is effective for one business entity can be detrimental to society as a whole. In fact, if the cost of the selling product is acceptable for the enterprise and its smoky pipes damage the entire forest, then a very large amount of money is required to restore that forest. If the plant produces alcohol and its cost is low, it is difficult to imagine how much money will be needed to repair the damage caused to society by the alcoholic beverage. Thus, the accounting of the enterprise faces a very important task, such as the calculation of the individual and public cost of finished products; (Potter, G., and Schmidgall, R. S.,1999)

Accounting of human resources - The strength of any enterprise depends on the human resources it employs. Traditional accounting draws attention only from the resources of the enterprise. According to its economic version, the human resources of any enterprise must be included in its assets on a continuous basis. In some countries, such calculations are made. In particular, training costs are capitalized in the balance sheet assets and then they are depreciated over a number of years;

Work with insiders. It is a very important task for our companies, but this problem is not only not solved, not even tried to solve it. An insider is a person who has extremely important information for his position. It is possible that the insider has the same information as the information he has can also be used by people close to him. In fact, the loss of income of the enterprise as a result of leakage of confidential information can occur only at the expense of competing enterprises. Therefore, it is necessary to adopt a special legislative act to prevent the disclosure of confidential information. Even if such an act will be accepted, it is impossible to completely prevent the leak of confidential information. In our opinion, accountants have enough to minimize the possibility of unauthorized access to information from insiders. great forces must be glorious (Генералова, Наталья, Сергей Модеров., 2010).

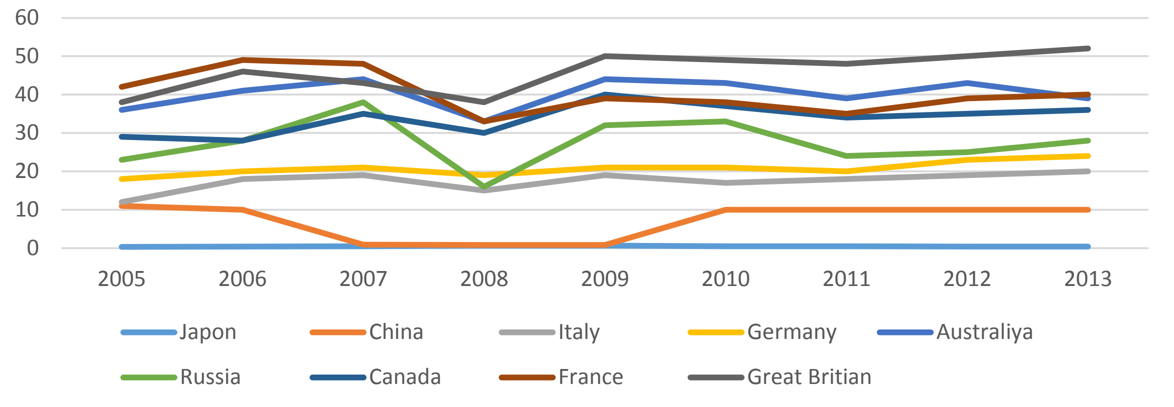
Analysis between financial performance and the number of entities applying IFRS

Due to the fact that the main goal of IFRS is the unification of accounting principles and methods used by companies of different countries to prepare financial statements and increase the investment attractiveness of these countries, we will choose the inflow of foreign direct investment as an indicator assessing the increase in the investment attractiveness of the country.

In fig. Figure 1 shows the level of annual inflow of foreign direct investment in countries, regardless of the date of transition to IFRS.

Based on the data in Fig. 1, we can conclude that in 2008 a decrease in foreign direct investment inflows was characteristic of all the countries analyzed, with the exception of Japan and China. In general, the dynamics of this indicator in all countries is positive - the share of foreign direct investment tends to increase. Let us determine the growth of this indicator in countries using IFRS (Fig. 1).

Fig. 1. The share of foreign direct investment in gross domestic product,%



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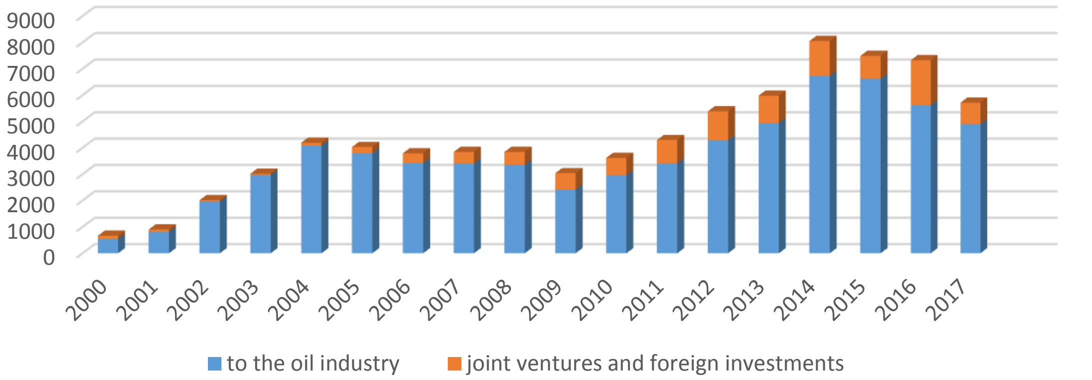
Analyzing the data of Fig. 1, it can also be concluded that since the introduction of IFRS, the countries represented have seen an increase in foreign investment in the economies of these countries, with the exception of 2008. Since the introduction of IFRS in all countries selected for the study, the share of foreign direct investment has increased, with the exception of Japan, supporting this indicator at the same level. Growth has been observed overall years, except for the period of the global financial crisis of 2008, which led to a significant reduction in the share of direct investment in all the countries studied, with the exception of Japan.

The share of foreign direct investment directed to the economy of Azerbaijan.

As can be seen from (chart 1) of the 2000-2017th year, the share of foreign direct investment in the economy of Azerbaijan amounted to 77.8 billion dollars. Of these, 66.8 billion dollars (85.9%) relates to the oil sector, the remaining 19.9 billion dollars. (14.1%) refers to the non-oil sector. It should be noted that the amount of foreign direct investment aimed at the oil sector has always exceeded the non-oil sector.

Chart 1. Dynamics of foreign direct investment in oil and non-oil sectors of Azerbaijani economy, million $



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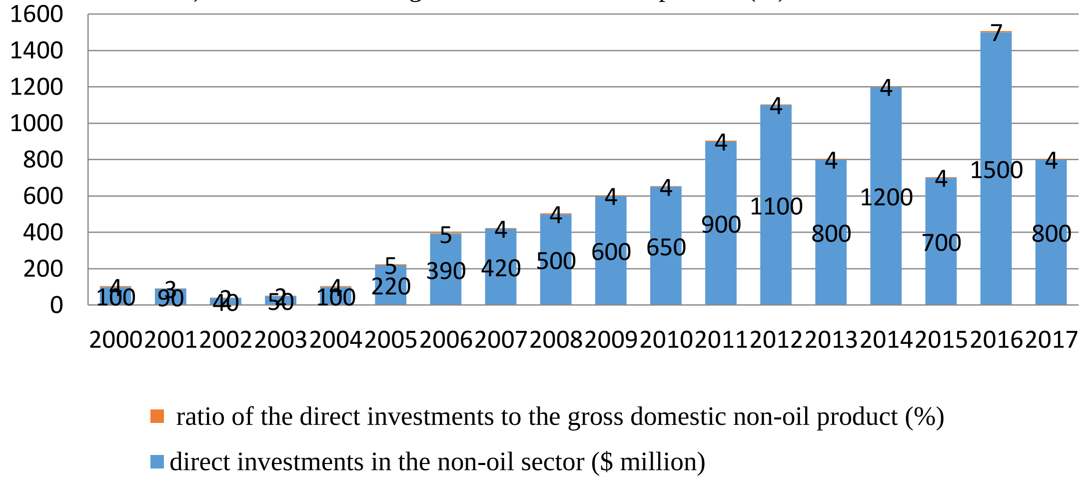
As can be seen from (chart 2) in 2008, the share of foreign direct investment directed to the non-oil sector amounted to 500 million dollars. In the 2012th year, this amount reached 1 billion US dollars. Despite their gradual increase in 2003-2014, fluctuations are observed in the share of foreign direct investment over the 2015-2017th years. So, compared with the 2014th year, in 2015, the share of foreign direct investment decreased by 34.7%, and in 2016 increased to 98.3% (1,7 billion US dollars) and amounted to $ 1.7 billion, in 2017 again a halving of 52.4% is observed.

Chart 2. Dynamics of direct investments in the non-oil sector over the years (USD million) and its ratio to the gross domestic non-oil product (%)



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In recent years, Azerbaijan has participated in a number of international projects. China's Belt and Road Initiative aims to connect the entire Asian continent with Europe. To this end, for several years now, both the countries of Southeast Asia and the South Caucasus (mainly Azerbaijan and Georgia) have signed a number of trade agreements with China. It is no secret that in recent years, China has been aiming to gain greater influence in the South Caucasus region, in addition to Asia. Most of the trade corridors implemented under the Silk Road project are connected to Azerbaijan and then to Georgia by the Caspian Sea. This allows Azerbaijan to play an important role in the world trade network. After several meetings in 2019 with the heads of a number of influential companies in Beijing, a new trade agreement worth $ 820 million was signed between Azerbaijan and China.

According to the companies that signed the agreement, the main goal is to stimulate the development of light industry in Azerbaijan. The agreement also envisages an increase in the volume of Chinese goods passing through the territory of Azerbaijan and the volume of products exported from Azerbaijan to this country (mainly Azerbaijani wine). In general, according to government agencies, the trade turnover between China and Azerbaijan in 2018 amounted to $ 1.3 billion. There is a 40 percent increase in the volume of goods imported from China.

Conclusion and Discussion

It is worth mentioning the problems that have been encountered and, possibly, will be faced by enterprises that have switched to IFRS (Kraus, Kalle, et al.,2015) Here are some of them:

- ✓ Incorrect composition of the organization's structures included in the consolidated financial statements;
- ✓ Lack of information systems for supporting IFRS or their poor quality. Underdeveloped market infrastructure. The high cost of implementing IFRS.
- ✓ Wrong choice of the method of obtaining financial statements.
- ✓ Reporting mismatch with organization requirements.
- ✓ Lack of the necessary organizational structure. Lack of qualified personnel both from the position of employers, and from the position of companies - customers of services under IFRS.
- ✓ Wrong choice of accounting policies
- ✓ Lack of information (complexity of texts of standards).
- ✓ Lack of generalization and analysis of the positive practice of applying IFRS by Azerbaijani companies, as well as explanations and comments on the standards of the Ministry of Finance and other competent authorities.
- ✓ The high cost of the services of audit and consulting companies

We conducted a correlation analysis between financial indicators and the number of entities that apply IFRS (banks and insurers), and found that the correlation coefficient is close to minus 1, which proves the close relationship between these indicators and indicates the enlargement of entities that apply IFRS in these sectors of the economy. It is worth noting that a very important aspect of introducing IFRS in Azerbaijan is increasing responsibility for the quality of assets of entities that apply IFRS, this allowed the market regulator to assess the actual quality of assets, which could lead to a reduction in the number of these entities. The positive aspects of the implementation of IFRS are highlighted in the report of (Bettner, Mark S., 2018). According to him, the introduction and implementation of IFRS:

- ✓ contribute to increasing the transparency and openness of organizations. In particular, interested users of the accounting (financial) statements were given the opportunity to analyze information about the financial and operational risks of organizations and how to manage them.
- ✓ ensure uniformity and comparability of financial statements of organizations with similar business entities abroad, increase the investment attractiveness of organizations and expand their access to international financial markets;
- ✓ provide investors with additional information necessary for making investment decisions contribute to improving the quality of the information base for decision-making by management of reporting organizations;
- ✓ contribute to further convergence of national and international accounting standards.

Based on the analysis, it can be argued that, in general, the international experience in using IFRS is positive, in countries using IFRS, there is an influx of foreign investment, but it is impossible to say that the reason for this inflow is the application of IFRS (Claman, Liz., 2006). The inconsistency of the experience of implementing IFRS does not allow us to assess the impact of the introduction on the economy of Azerbaijan in general and its entities in particular. It should be noted that it is important to organize constant monitoring of the effect of the implementation of IFRS for certain sectors of the economy and Azerbaijan as a whole.

Plagiarism Rate =6,29 %

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Estimating Student-teacher Ratio in Primary Education under Fluctuating Student Enrollment with ARIMA

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Abstract
This study develops a framework to detect the trend of student-teacher ratio under the fluctuating student enrollment. The target education series data (1949-2018) cited from the MOE in China. Taken China's primary education as an example, we employ cross correlation function, ARIMA or ARIMAX model to verify the future trends of student and teacher numbers. The findings suggest the fittest ARIMA models were used to interpret the trend of student-teacher ratio properly. The findings reveal the calculated student-teacher ratio with the trend of fluctuating student and teacher numbers will decline in future. While the actual student-teacher ratio might increase in future based on the proposed ARIMA model with student-teacher ratio series data. The gap between the calculated and actual student-teacher ratio may provide a feasible range to estimate the future trend. The results provide useful information for related policy makers to better control the quality education in primary schools.
Keywords: ARIMA, cross correlation function, elementary education, student-teacher ratio, teaching quality

Introduction

Previous studies on transformation of primary education typically are driven by content, curriculum reform, social change, and even the declining birthrate. While the structure of student-teacher ratio issue in primary education under the pressure of declining birthrate has little been discussed with series data in previous literature. Even though China has the largest elementary education system in the world, the declining birthrate has shown threaten the expanding primary education. Based on the data from Ministry of Education in China, we found the largest numbers of student in primary schools is 150,941 thousands (1975), recent lower is 93,605 thousands (2013) (National Bureau of Statistics of China, 2019). The declining of student numbers is amazing, see Figure 1 (left). In the other hand, the number of teachers has shown increasing in China steadily. The largest numbers of teachers has shown in 2018, see Figure 1 (right). We wonder the increasing of teachers is a new beginning or it will growth unlimited in future? In this study, we aim to realize to what extent of the declining will impact on the student and teacher numbers in primary schools directly. We will focus on the quality of teaching issue in terms of the student-teacher ratio which will impact on the classroom teaching. Based on the long term data set, we will analyze the student-teacher ratio in China and select fittest models to project its trend in future. Time series studies occur in the field of economics, where they exposed daily stock market quotations or monthly unemployment figures (Shumway & Stoffer, 2017). Various time series studies have focused on ARIMA (autoregressive integrated moving average) models with serial data (Nath, Dhakre, & Bhattacharya, 2019; Yuan, Liu, & Fang, 2016; Wu, Chang, & Hu, 2019), while using series data is an emerging area of research in social science (Achille, Haberman, & Consigli, 2018; Chamlin & Sanders, 2018; Chang & Lai, 2019). Although time series analysis has been used for a long time, its application to tackle student-teacher ratio issue is still limited. This study may fill the research gap in current education studies.

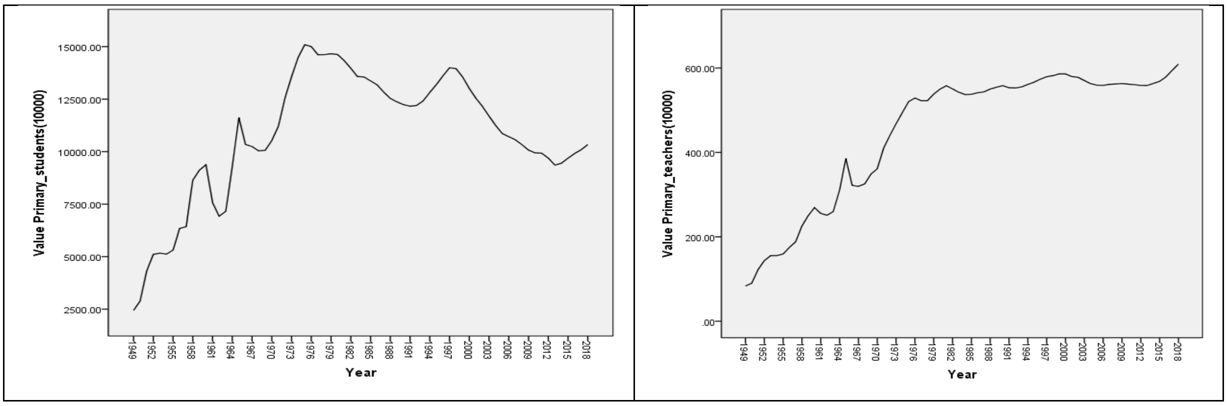

Figure 1. The trend of student and teacher numbers in primary schools in China

The number of teachers per class and the student-teacher ratio are indicators of quality teachers in a country. The indicator may offer policy insights into opportunities for teacher preparation or the allocation of teachers properly. Regarding the global context, the fitted student-teacher ratio is diverse. OECD-related data may provide a reference framework to review this issue. On average across OECD countries, class size decreased between 2005 and 2015 in 13 out of the 25 countries at primary education. Generally, at primary school level, there are 21 pupils in an average class in OECD countries. While the OECD report reveals that there are fewer than 27 pupils per class in nearly all countries with the exception of Chile, China, Israel and Japan (OECD, 2017). Furthermore, the OECD 2017 report shows the ratio of students to teaching staff in primary education is on average 15 in OECD countries, on average 14 in EU22 and 19 in G20 with full-time equivalents. The student-teacher ratio ranges from 10 or fewer in Lithuania and Norway to 27 in Mexico, 29 in India and 33 in South Africa (OECD, 2017). The student-teacher ratio has become one of crucial quality indicators in education. In this sense, we will explore to what extent of the gap between China and OECD countries. This study will explore the student-teacher ratio under the student enrollment declining in China. Specifically, we will address the following research questions to explore the issue.

a. What kind of relationship between student and teacher numbers in the series data sets?
b. Can student-teacher ratio be predicted by using time series approach properly?
c. What kind of trend of student-teacher ratio under decline birthrate in the future?

Given these purposes, the structure of this paper will be displayed as follows: First, we define the data set and their transformation process. Second, we display the result of ARIMA with student-teacher ratio prediction. Finally, the conclusions and suggestions are drawn.

Method

The related primary education series data (1949-2018), cited from the MOE in China, were published online or print for public purposes (National Bureau of Statistics of China, 2019). The major technical terms in this study are defined as follows:

- Capacity of primary school students (CPSS) refers to total number of primary school students in the education system; The series data were collected from cover 1949 to 2018 based on annual basis.
- Capacity of primary school teachers (CPST) refers to the total teachers in primary schools on an annual basis. The series data were collected from 1949 to 2018. Totally, there are 70 records.
- Student-teacher ratio (STR) refers to numbers of students over teachers in primary education. Original student-teacher ratio is based on the report of MOE in China.

Dealing with forecasting, we found regression model, trend analysis and ARIMA model have different function with data sets. The regression model typically fits to randomized data sets, while it does not satisfactorily to deal with time series data due to its normalized assumptions. The trend analysis belongs to the times series family, it is limited to handle one data set for each model only. The selected series data sets covered 70 periods to fit the requirement of ARIMA or ARIMAX (multivariable autoregressive integrated moving average) model building. Considered the characteristics of the data sets, we selected the ARIMA or ARIMAX model to building fitted future trends. Forecasting has been introduced in education settings for a long time, for example the previous studies have demonstrated the ARIMA can be transferred to tackle specific issues in education (Chang, 2018; Chang, & Hu, 2019; ChangTzeng, Chang, & Lo, 2019). The selected ARIMA or AMIMAX with transfer function can deal with universal or multivariable models which are better than their counterparts. In this study, we conduct the cross correlation function (CCF) to determine the relationship between the numbers of students and teachers. If the relationship exists, we determine whether the student-teacher ratio can be used to interpret the trend in future with ARIMA or ARIMAX.

The logic of predicted model building

In this study, we consider the CPSS and CPST for their cross correlation function. CCF is the first step to check if the CPSS and CPST with concurrent relationships for building ARIMAX model. When the CCF does not exist in the two series, we check STR series data. Since the trend of STR is integrated by CPSS and CPST, it may reflect the characteristics of both series data sets. Finally, we can find a fitted model to estimating the trend of student-teacher ratio in the primary education. The logic framework of model building is presented in Figure 2.

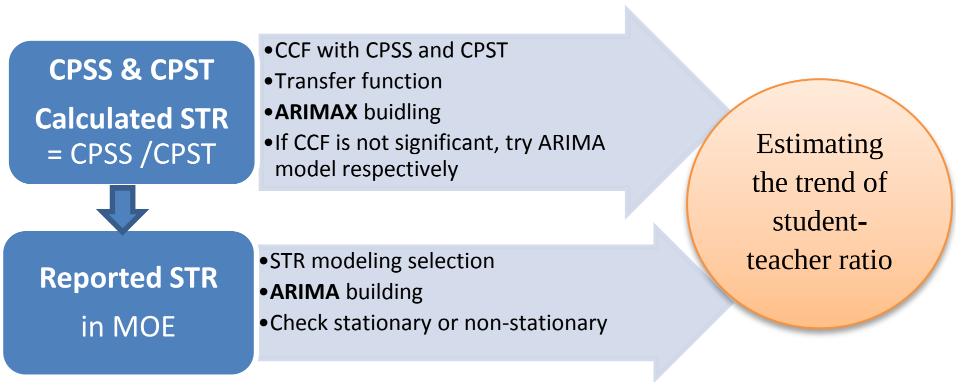

Figure 2. The logic framework of predicting model building

Cross correlation function

CCF is the degree of similarity between two times series in different times or space which the lag can be considered when time is under investigation. In this study, the trends of student numbers and teacher numbers in the primary education setting is fit the definition of CCF to further verification. Previous studies have provided useful suggestions to conduct CCF. For example, Mardia and Goodall defined separable CCF as $C_{ij}(X_1,X_2) = \rho(X_1,X_2)a_{ij}$, where $A = [a_{ij}]$ is a $p \times p$ positive definite matrix and $\rho(X_1,X_2)$ is a valid correlation function (Mardia & Goodall, 1993). For further interpretation, given two processes X_{1t} *and* X_{2t}, $(x_{1t,2t+k})$ is the cross correlation between X_{1t} *and* X_{2t} *at lag* k, while, $\rho(x_{2t,x1t+k})$ is the cross correlation between X_{2t} *and* X_{1t} *at lag* k (Box, Jenkins, & Reinsel, 1994). In the case of X and Y, the variable X may be cross correlated at different lags of Y, and vice versa. In this study, we propose a way to detect cross correlation coefficients with SPSS (Statistic program for social science) program to determine whether the CCF is existed in both non-stationary series. Moreover, we can use the following rules to judge the two series which one is dependent or independent variable:

- *When r_{xy} is positive and significant, x_t is possible as independent variable, while y_t is dependent variable in the model.*
- *When r_{xy} is significant in lag 0 only, x_t and y_t are concurrently with their impacts. It implies the x_t impacts on y_t, while y_t also impacts on x_t.*
- *When r_{xy} is significant with positive and negative values in certain lags, we may assume that x_t impacts on y_t, where the impact of y_t will feedback to x_t.*

In this case, first we check the series with stationary, then we just the CCF by using the significant cross correlation coefficients for both series data with .05 significant level. When the CCF exists, we conduct the ARIMAX.

The process of forecasting

In this study, the processes of model building are as follows: First, detect if the series of STR is seasonal or non-seasonal. Second, select ARIMA(p,d,q) models by using the differences and visualizations of ACF (autocorrelation function) and PACF (partial autocorrelation function) (Davis, Coole, & Osipyw, 2014; Rotela, Salomon, & Pamplona, 2014).Third, verify the robustness of the series with the fitted ARIMA model for the next 10 years in terms of the projections from 2019 to 2028. The analysis is carried out using SPSS. Typically, a non-seasonal ARIMA model is classified as an “ARIMA(*p,d,q*)” model, where:

p is the number of autoregressive terms,
d is the number of non-seasonal differences needs for stationarity, and
q is the number of lagged forecast error in the prediction equation.

When the difference fits the model building. The fittest model selection will depend on its parameters, BIC (Bayesian information criterion) and Q test. In this study, Box-Pierce Chi-square statistics (Ljung Box test) were used to determine whether the model met the assumptions that the residuals were independent [11]. For Q test, the calculations were listed as follows (Ljung & Box, 1978; Nau, 2014):

$$Q^*(K)=(n-d)\cdot(n-d+2)\cdot\sum_{l=1}^{K}(n-d-l)\cdot r_l^2(\hat{a})$$

where, n is the sample size,
d is the degree of non-seasonal differencing used to transform the series to a stationary one,
$r_l^2(\hat{a})$ is the sample autocorrelation at lag l for the residuals of the estimated model,
K is the number of lags covering multiples of seasonal cycles, e.g. 12, 24, 36,…for yearly data.

The null hypothesis of the Ljung Box test, H_0, is that our model does not show lack of fit (or in simple terms-the model is just fine). The alternate hypothesis, H_a, is just that the model does show a lack of fit.

Result

Concurrent relationship between the trends of students and teachers

The result of CCF shows the series of primary school students and teachers are only significant in lag 0 (CCF r=.839). It implies both series data are not a good fit for transfer function ARIMA model in terms of ARIMAX did not exist in this case. The result of transformation with natural logarithm and non-seasonal differencing 2 times displays in Table 1 and Figure 3.

Table 1. Cross correlations of CPSS and CPST

Lag	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7
Cross Correlation	0.357	-0.117	0.171	-0.087	-0.189	-0.141	-0.245	0.839	-0.092	-0.103	-0.311	-0.033	0.113	-0.023	0.337
Std. Error	0.128	0.127	0.126	0.125	0.124	0.123	0.122	0.121	0.122	0.123	0.124	0.125	0.126	0.127	0.128

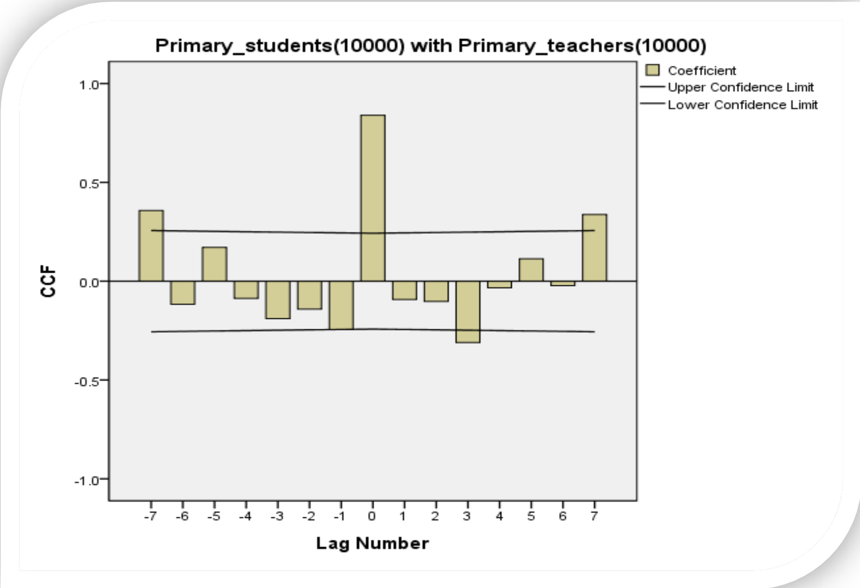

Figure 3. The significance of coefficients in CCF

ARIMA building for CPSS and CPST

The SPSS program suggests ARIMA(2,1,2) for CPSS and ARIMA(0,1,0) for CPST are the fittest models. The predicted values of CPSS and CPST for next decade are listed as Table 2. Based on the predicted values, we found the student numbers will change very slim. While the numbers of teachers will increase significantly in next decade. The plot of CPSS and CPST is displayed in Figure 4.

Table 2. The predicted values with ARIMA(2,1,2) for CPSS and ARIMA(0,1,0) for CPST

Period	Year	CPSS			CPST		
		Forecast	UCL	LCL	Forecast	UCL	LCL
71	2019	10424.42	11641.68	9207.16	616.81	651.83	581.79
72	2020	10487.93	12636.75	8339.11	624.42	673.95	574.90
73	2021	10471.68	13445.23	7498.13	632.04	692.69	571.39
74	2022	10430.64	13954.81	6906.47	639.66	709.70	569.62
75	2023	10420.59	14318.78	6522.40	647.28	725.58	568.97
76	2024	10437.76	14670.99	6204.54	654.89	740.67	569.12
77	2025	10450.90	15036.51	5865.29	662.51	755.16	569.86
78	2026	10447.77	15382.16	5513.39	670.13	769.17	571.08
79	2027	10439.39	15688.30	5190.48	677.75	782.80	572.69
80	2028	10437.23	15968.11	4906.36	685.36	796.10	574.63

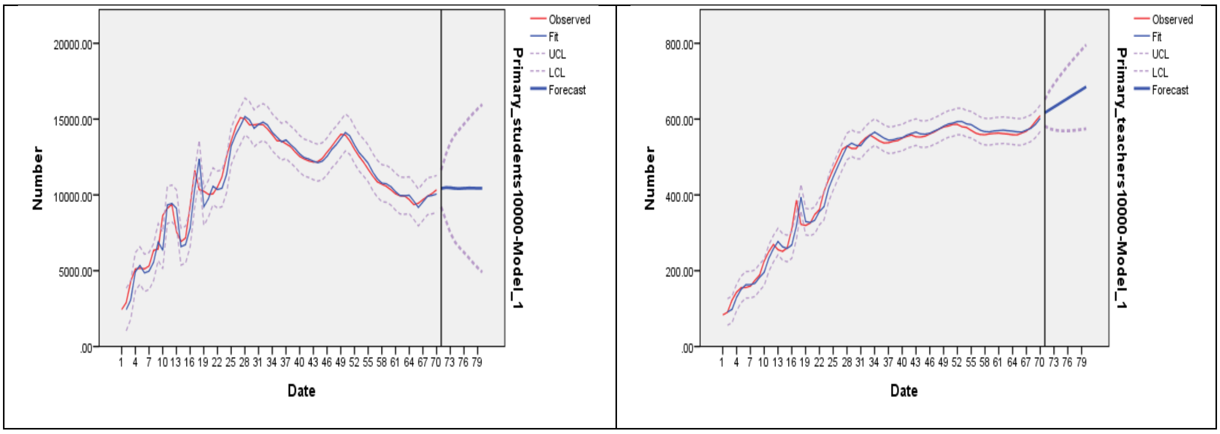

Figure 4. ARIMA(2,1,2) for CPSS (left) and ARIMA(0,1,0) for CPST (right)

ARIMA building for STR series

Based on the data of Ministry of Education, the largest numbers of student in primary schools is 150,941 thousands (1975), recent lower is 93,605 thousands (2013). Since the student numbers have shown declining in recent years, while the numbers of teachers still increase steadily. Will the phenomenon impact the student-teacher ratio in future? The ARIMA(2,1,2) suggests trend of CPSS is steady in next decade. The increasing student numbers do not exist significantly in the predicted model. However, the CPST with ARIMA(0,1,0) shows it will increase significantly in next decade. The predicted CPSS/CPST will provide a new STR in next decade.

In this case, we also suggest consider the STR series data directly, it may become an alternative approach to realize the issue in future. Therefore, we detect the student-teacher ratio series with ARIMA model to build its future trend. ARIMA(3,1,0) suggests the RMSE = 1.225, normalized BIC = 0.529 are the smallest. In this suggested model, the Ljung-Box Q(18) = 0.068 is also satisfied the while noise test. The limited residuals of ACF and PACF in the model are demonstrated in Figure 5. The testing of parameters for primary student-teacher ratio is displayed in Table 3. The suggested model shows the AR is significant in Lag 1 and Lag 3 respectively with one time difference.

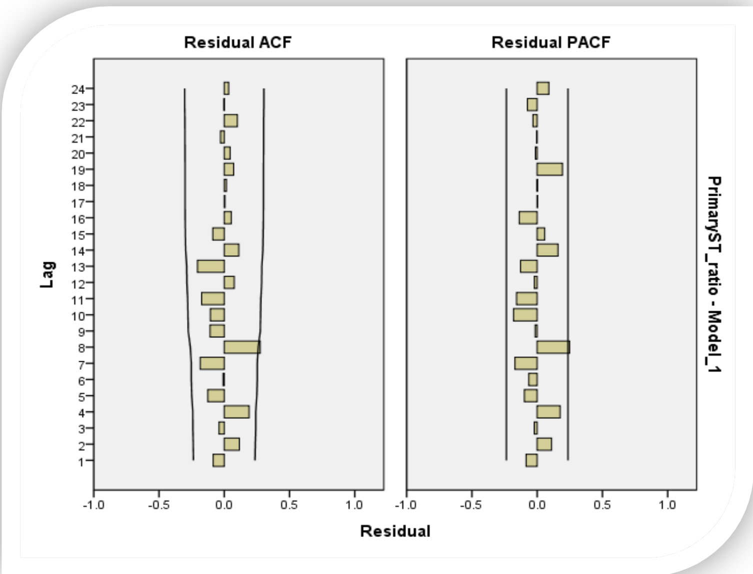

Figure 5. The residual of ACF and PACF for building ARIMA(3,1,0) for STR

Table 3. ARIMA(3,1,0) parameters for primary student-teacher ratio

Primary ST_ratio	Model		Estimate	SE	t	Sig.
	AR	Lag 1	0.322	0.112	2.871	0.005
		Lag 3	-0.412	0.107	-3.846	0.000
	Difference		1			

Note. Best-fitting models according to stationary R-squared (larger values indicate better fit).

Compared the predicted STR with ARIMA (3,1,0) and STR with predicted CPSS/CPST for next decade are listed as Table 4. The result reveals the STR will increase from 16.95 (in 2019) to 17.13 (in 2028). The plot of ARIMA (3,1,0) for building STR with observed and forecast values has demonstrated in Figure 6. The model suggests the STR in future may experience a little turbulence regardless the students and teachers increasing rapidly. While the CPSS and CPST based on ARIMA(2,1,2) and ARIMA(0,1,0) suggest the STR will decrease from 16.90 in 2019 to 15.23 in 2028. There is a gap between the two different way to predict STR. The results provide useful information for related policy making.

Table 4. Forecast for STR with different models

Year	STR Forecasts with ARIMA(3,1.0)	CPSS/CPST based on ARIMA(2,1,2) and ARIMA(0,1,0)
2019	16.95	16.90
2020	17.02	16.80
2021	17.07	16.57
2022	17.1	16.31
2023	17.09	16.10
2024	17.09	15.94
2025	17.08	15.77
2026	17.1	15.59
2027	17.11	15.40
2028	17.13	15.23

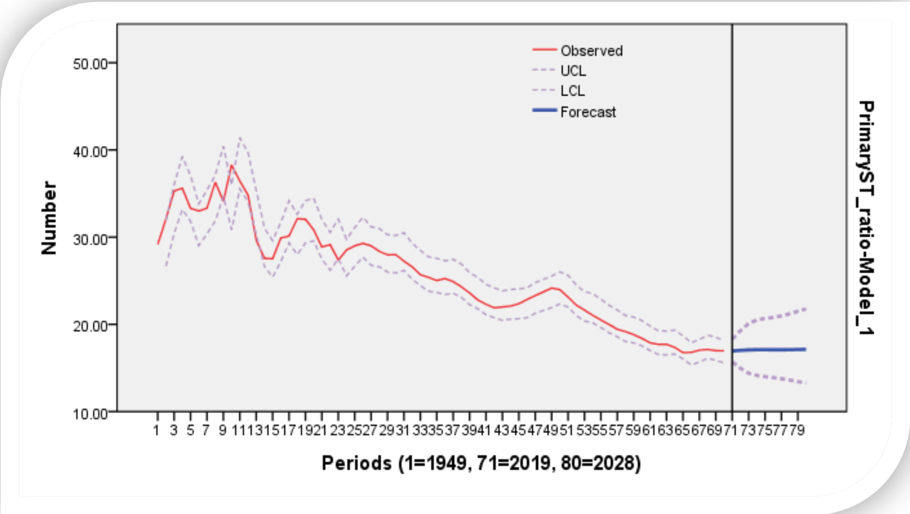

Figure 6. The predicted values for STR from 2019 (period 71) to 2028 (period 80)

Conclusion

Based on the global context and the systematic data analysis, this study tackles the student-teacher ratio issue in a declining student enrollment system. Although the quantitative approach was limited by the data set, the explanation of the forecasting provides a longitudinal perspective for reviewing the trend of student-teacher ratio in primary education. This design model can be used to detect the declining of student numbers and the increasing phenomenon of teacher numbers in primary education. In global context, the ratio of students to teaching staff in primary education is on average 15 in OECD countries and on average 14 in EU22, China is approaching to that standard as our predication. Considered the characteristics of STR, it is a practical indicator to review the quality of primary education. The result of forecasting provides useful policy intervention information for balancing the numbers of students and teachers. For better enhancing quality of teaching, we suggest:

First, more specific to review the differences in cities and rural areas to highlight the STR issue.

Second, reducing the student-teacher ratio in future to fit average level in the OECD counties.

Third, building a long term review mechanism to prompt the issue is needed, for example the mechanism is based on annual data set automatically.

For further studies, we suggest both ARIMA and ARIMAX are useful tool to explore time series data set. The design of this study can be extended to similar settings to tackle the related predicting problems.

Plagiarism Rate = 0

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Education of Leading Pedagogical Staff with a Focus on Their Educational Needs

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Abstract
The paper focuses on the area of further education of pedagogical staff. Specifically, it deals with leading pedagogical staff, i.e. leaders in schools and educational institutions. Currently, courses and other educational activities are offered as further education, but they often do not reflect the current trends in the area of managing kindergartens, small schools, elementary schools, secondary schools, children's homes, child protective services, and institutions offering leisure activities. The aim of the paper is to provide a theoretical definition of the issue of further education for leading pedagogical staff in the Czech Republic and providing an analysis of this group's educational needs with a focus on increasing managerial competencies for leading pedagogical staff in kindergartens, small schools, elementary and secondary schools, children's homes, child protective services, and institutions offering leisure activities. Data with be obtained through a questionnaire survey and implemented brainstorming, and will be further evaluated in the form of specific educational proposals. The output will be the presentation of specific topics in order to construct a modular education system focused on gaining and expanding competencies within pedagogical leadership and management, getting acquainted with the principles and current trends in human resource management, deepening knowledge in relevant legislation, sharing experiences and self-reflection.
Keywords: Education, further education, leading pedagogical staff, educational needs.

Introduction

The paper focuses on further education of educational staff (hereinafter referred to as DVPP based on the Czech acronym) in the Czech Republic. Kohnová (p. 59, 2004)defines this term by comparing it with another term – "professional development", i.e. according to Mužík (1998) referred to as "adult professional development".The author understands education to be as one of the parts of professional development. The facets of professional development are self-study, development of knowledge through practice, and further education. In addition to the state, schools and educational institutions, pedagogical staff should participate in the DVPP system. They should be able to plan their DVPP activities appropriately and select suitable courses in order to achieve the right educational efficiency and usability in practice. Thus, it is important how pedagogical staff expect from this education, and what they believe can contribute to their pedagogical profession. In accordance with this idea, the research strategy of this paper is also selected.

Specifically, the paper deals with leading pedagogical staff, i.e. leaders in schools and educational institutions. At present, courses and other educational activities are offered as further education, but they often do not reflect the current trends in the area of human resource management in kindergartens, small schools, elementary and secondary schools, children's homes, child protective services, and institutions offering leisure activities. The results of evaluation of programs implemented to date, such as the Programme for Leading Pedagogical Staff (Section 7, Decree No. 317/2005. Coll. as amended), show that the standards of such educational programmes are completely insufficient. There is a lack of motivation for leading pedagogical staff to take part in self-education, but also mutually sharing experiences and self-reflection of leading pedagogical staff.Another reason for the need for such a project is based on the initiatives the EU's system projects (especially IPs Strategic Management and Planning in Schools and Areas –SRP, Implementation of a Career System for Educators – IMKA, Joint Education and Support for Schools Step-by-Stem – Implementation of an Action Plan for Inclusive

Education – methodological support –APIV A, and Support of Joint Education in Pedagogical Practice –APIV B, and following the experience of verifying the Educational Leader programme. Last but not least, we also rely on the outputs of reports and results of the Czech School Inspectorate.

Strategic documents of regional education of leading pedagogical staffand minutes from working meetings with school headmasters (e.g. the Regional Action Plan for the Development of Education in the Olomouc Region, Czech Republic) also support the creation of conditions for educatingleading pedagogical staffby expanding the offer of quality DVPP programmes.

Education forleading pedagogical staffis legislatively primarily required by Act No. 563/2004 Coll., on pedagogical staff, in which provision 5 stipulates the preconditions for performing the activities of a school headmaster, in contrast to regular pedagogical staff,with the requirement for experience in direct pedagogical activity, activity thatrequires knowledge of the same or similar focus, managing activity, or research and development activity for a duration according to the type of school or educational institutionwhere the headmaster is expected to act as leader. A person can become a leading pedagogical staff member in schools managed by the Ministry of Education, Youth and Sport, the region, municipality or a voluntary union of municipalities, whose subject of activity is performing tasks in the area of education, if he/she – aside from these preconditions– acquires knowledge in the field of education management by completing studies for headmasters no later than within two years of starting in the position of school headmaster through further education offered to pedagogical staff. The implementation conditions of this programme are also regulated in detail by this Act

Leading pedagogical staffare not required to participate in the study programme for headmasters of schools managed by the ministry, region, municipality or union of municipalities if they have acquired the required knowledge in the field of education management through university education in an accredited school management study programme, or by taking part in continuing university education focused on organisation and management in education.The content of the implemented qualification study programme for headmasters of schools and educational institutions, which is offered in the realm of further education, is based on the definition of personality and professional competencies of leading pedagogical staff, and focuses on the acquisition of knowledge and skills in the realm of education management. This then allows the pedagogical staff member to carry out the position of headmaster of a school or educational facility. The content of the study programme corresponds to the requirements for knowledge and skills of school headmasters, and is implemented in accordance with the aforementioned act on pedagogical staff, but also with Decree No. 317/2005 Coll., on the further education of pedagogical staff. It defines the outputs and scope of separate types of study programmes and is also essential legislative support for the given study programme.

The Ministry of Education, Youth and Sport of the Czech Republic goes on to supplement these two legislative norms with the Standards for Granting Accreditations for Further Education of Pedagogical Staff, published under File No. 26 451/2005-25, 30 908/2005-25, which determine the partial modules of the study programme.Therefore, the system of educating leaders in schools and educational institutions in the Czech Republic is established as a study programme for headmasters of schools and educational institutions pursuant to the provisions of Section 5, Paragraph 2 of Act No. 563/2004 Coll., The Act on Pedagogical Staff and provisions of Section 7 of Decree No. 317/2005 Coll., on further education of pedagogical staff; that is, qualification studies implemented within the scope of further education of pedagogical staff, which is intended for pedagogical staff holding or intending to hold the position of headmaster in a school or educational facility. The standard of this study programme for headmasters of school and educational institutions according to the Act on Pedagogical Staff is focused on acquiring knowledge in the field of education management, enabling one to hold the position of headmaster of a school or education facility according to the Act on Pedagogical Staff. The study schedule includes at least 100 hours of direct instruction, including a practicum of at least 15 hours. The study program consists of four basic modules, namely the foundations of law, labour law, school financing, school organisation, and the pedagogical process. The standard of the study programme forleading pedagogical staff, according to the Decree on Further Education of Pedagogical Staff, is aimed at pedagogical staff who hold or are interested in holding the position of headmaster of a school or educational facility. The study programme is aimed at acquiring knowledge and skills in managing a legal entity operating a school or educational facility, especially the theory and practice of school management, law, economics, pedagogy, psychology, occupational health and safety, communication and information technology, again, all according to the relevant provisions in the Act on Pedagogical Staff. The study programme's schedule is spread over 350 hours, consists of five modules, namely the theory and practice of school management, law, economics and financial management, management of the pedagogical process, and leadership.

Research problem

Within the translated analysis of educational needs of leading pedagogical staffwe focused on those who have already completed qualification education, but still feel certain shortcomings when it comes to their personal professional development. They expect a certain educational offer from DVPP. The analysis was initiated despite the problems faced in practice (not so much the needs), as recommended, inter alia, by Plamínek (p. 77, 2014).

The research problem is therefore defined as follows:

What are the educational needs of leading pedagogical staffin kindergartens, small schools, elementary and secondary schools, children's homes, child protective services, and institutions offering leisure activities?

Method

With regard to the above-mentioned stimuli in the field of educatingleading pedagogical staff, it is desirable to create and offer an educational module program for in-school experience, including educational materials and professional methodological materials, which will serve to increase the competencies ofleading pedagogical staffin kindergartens, small schools, elementary schools, secondary schools, children's homes, child protective services, and institutions offering leisure activitiesin pedagogical management.However, in order to create these modular programmes, it is necessary to find out the actual educational needs of leading pedagogical staffin schools and educational institutions.A combination of brainstorming and questionnaire surveys was used for this purpose. Data from the analysis will be obtained through the use of a questionnaire survey and implemented brainstorming, and will be further evaluated in the form of specific educational proposals.

The research survey with the intention of finding out the educational needs ofleading pedagogical staffwas carried out through six meetings of working groups, which included theleading pedagogical staffof the above-mentioned types of school and educational institutions. These meetings took place in different regions of the Czech Republic and were attended by a total of 51 representatives ofleading pedagogical staff, i.e.headmasters of schools and educational institutions. The content of the working group meeting was to have a brainstorming session and identify educational areas that should be represented in the educational module programmes, including the definition of specific content. At the end of these meetings, participants received printed questionnaires, which they then completed summarising the stimuli of the working groups.

The aim of the questionnaire survey was to find out the importance of topics and their classification (i.e. as in-class or distance education) in the educational module programme.With regard to the topics in the basic thematic block, we formulated the following items in the questionnaire, which were evaluated by respondents using a scale ranging from 1 to 5 (1 – definitely include, 2 – rather include, 3 – rather not include, 4 – definitely not include, 5 – I cannot judge).

Findings

The output of the survey, i.e. the analysis of educational needs, is the presentation of specific topics in order to create an educational module programme aimed at acquiring and expanding competencies within the scope of pedagogical leadership and management, getting acquainted with the fundamentals and current trends in human resource management, deepening understanding and knowledge in relevant legislation, sharing experiences and self-reflection.

Specific results and findings obtained through the analysis of educational needs are presented in a summary of the following topics, including a specification of their content.

<u>Managing a pedagogical team</u>(change management, strategic planning, use of mentoring and coaching in the work ofleading pedagogical staff)

According to the questionnaire results, 90% of respondents agree that the topic of leading a pedagogical team should definitely be included in the educational module programme. This topic should go on to include strategic planning, the concept of the school, including stakeholders in the planning process, coaching, a demonstration of holding a meeting – video, self-experience, effective conflict resolution. Thus, this is one of the most sought-after areas of education.

<u>Typologyof subordinates</u>

Sixty-eight percent of respondents are convinced that the topic of the subordinate typology should be included in the educational module programme. This topic should also include professional publications on how to recognise individual types – some simple instructions on how to evaluate new employees, Balben testing, experiencing emotion, (pest), roles – how to work with them, self-experience.

<u>Difficult personalities</u>

According to the answers from the survey, most respondents agreed that the topic dealing with difficult personalities should be included in the educational module programme. Eighteen percent of respondents stated that this topic should rather not appear in the programme, and 4% of people were completely against including the topic. The topic should further include the fundamentals of communication, help from the external environment, tips on how to work with difficult personalities, how to motivate them, tips on what to avoid, methods of resolution, case studies of difficult personalities.

<u>Defining people’s determinants and limits</u>

Only 10% of respondentssaid that they would like to address the topic of defining people’s determinants and limits in the educational module programme; 43% would rather include this topic. A relatively large percentage of respondents cannot judge whether or not such a topic should be included. The topic should go on to include the use of supervision and personality psychology. According to the respondents, the topic should also be merged with topics 2 and 3, i.e. typology of subordinates and difficult personalities.

<u>Observations</u>

It is quite clear from the analysis that this should be, according to 65% of respondents, included in the educational module programme. The topic should also include materials required for inspections, a protocol of the observation record, what to focus on, forms, analyses, and motivations for observation.

<u>Managing an educational institution as an inclusive school or educational institution</u>

Most respondents (31%) believe that the topic “Managing an educational institution as an inclusive school or educational institution” should rather be included in the educational module programme, 29% agree that the topic should definitely be included. However, a significant percentage of respondents think that this topic should rather not be included, and 12% absolutely disagree with its inclusion. It will therefore be the subject of further discussion whether or not this topic should appear in the educational module programme, or how much space will be assigned to it. The topic should include gaining one's bearings in legislation, visiting partner schools, sharing experiences, and legislation concerning inclusive education.

Defining and fulfilling the vision of a school's or educational institution's development (The process of gaining authority in leading others. Exercising power. Acquiring and verifying people's leadership tools)

The analysis clearly shows that the topic "Defining and fulfilling the vision of a school's or educational institution's development" should be included in the educational module programme. The topic should also include assistance in composing the vision, concept, tools for managing people, model situations, an audit of the current state. This topic should be merged with item no. 1, i.e. managing a pedagogical team.

Application of school legislationaccording to current legal norms (career code, school legislation, labour and administrative law)

The respondents' opinions are clearly in line that the topic "Application of school legislation according to current legal norms" should definitely be included in the educational module programme. The topic should also include administrative law in practical examples, a brief overview, news and regularly updated instructions on what to change and what the change is about (guidelines in schools).

GDPR – Regulation 2016/679 of the European Parliament and of the Council from 27 April 2016 on the protection of individuals with regard to the processing of personal data and on the free movement of such data

According to the answers of the respondents, the GDPR issue and its classification within the educational module programme will be the subject of further discussion. An equal percentage (25%) of interviewed managers agreed that this topic should be included; however, 18% of respondents believe that it should not be included, and 14% cannot judge the situation. According to some respondents, it is relatively late to discuss this topic, but if something were to be added, it would be news presented in this area.

Personal data protection in the school environment – measures that will need to be taken in schools.

Thirty-seven percent of respondents stated that it is definitely necessary to have the topic of personal data protection in the school environment in the educational module programme. On the contrary, 12% are definitely against it.

Employee training, changes inkeeping documentation on pupils and employees, safeguarding against data leakage

According to the results, the graph shows that 49% of responding managers believe that this topic should rather be included, 23% entirely agree. Fewer respondents are not entirely convinced about including "Employee training, changes in keeping documentation on pupils and employees,safeguarding against data leakage" in the programme. According to the respondents, topics 9, 10 and 11 should be presented as one whole.

Administrative law – possible difficulties resulting from the decision-making activities of headmasters in schools in connection with the application of the Administrative Procedure Code x the Education Act

Sixty-nine percent of respondents would definitely include "Administrative lawandpossible difficulties resulting from the decision-making activities of headmasters in schools in connection with the application of the Administrative Procedure Code and the Education Act" in the educational module; only 2% would omit this topic. This topic should be supplemented with the definition of a headmaster's decision-making authority, clear references to legislation including changes, records for the Institute for Information in Education (UIV), school register, deadlines, admission procedures, interruptions to administrative proceedings, enrolments in kindergarten, elementary school, secondary school, and on which bases they are accepted.

Labour law – employing pedagogical staff – temporary employment, permanent contract, scope of direct teaching obligation x indirect teaching obligation – obligation to remain at the workplace, remuneration, professional qualification of pedagogical staff – applying exceptions in practice

The topic "Labour law – employing pedagogical staff – temporary employment, permanent contract, scope of direct teaching obligation x indirect teaching obligation – obligation to remain at the workplace, remuneration, professional qualification of pedagogical staff – applying exceptions in practice"should certainly be included in the educational module programme according to most respondents (71%);only 2% of respondentswould not include this topic. The topic should also include specific areas, direct and indirect work, remuneration tables.

Education Act – supporting measures in supporting education of students with specific educational needs, education possibilities for exceptionally gifted students, individual education plans

Also the topic of the "Education ACT – supporting measures in supporting education of students with specific educational needs, education possibilities for exceptionally gifted students, individual education plans" enjoyed great interest in being included according to the questionnaire survey (53%). The topic should include current news, but should mostly be associated with item no. 6 "Managing an educational institution as an inclusive school or educational institution" and no. 8 "The application of school legislation according to current legal norms (career code, school legislation, labour and administrative law)".

Possibilities of resolving educational issues in schools – measures that the headmaster can handle in certain situations, educational measures

A total of 37% of interviewed managers would certainly welcome the topic "Possibilities of resolving educational issues in schools – measures that the headmaster can handle in certain situations, educational measures" in the educational module programme, but 14% of respondents do not agree with this topic. The topic should include specific possibilities of resolving issues and model situations, examples of good practice, sharing, the relationship between the Ministry of Education, Youth and Sport and the Ministry of Labour and Social Affairs (Agency for Child Protection – OSPOD) and possibilities of joint action, school counselling facilities, who belongs where, ways of dealing with parents, educational plans, minimum prevention programmes and legislation.

Observing compulsory school attendance – individual education, education process, student evaluation

Twenty-five percent of persons are in favour of including this topic in the educational module programme, 33% are rather in favour for the inclusion. Twenty-four percent of respondents believe that "Observing compulsory school attendance – individual education, education process, student evaluation" should not have to appear, and 14% are completely against it. The topic should include forms, instructions, links, professional training, and formative assessment.

Occupational health and safety (OHS)– training employees and students to comply with occupational health and safety standards, ensuring supervision of students, record of accidents and compensation, insurance in case of liability for damage, school liability for children during events organised by the school outside of school premises

Opinions on including the OHS topic differ among respondents: while 18% would definitely like this included, 18% are against it, and another 35% would rather not include this topic. The topic should include ensuring OHS during events held off school premises, camping trips, day trips, laboratories, workshops, and should also include examples of accident records.

Financial minimum (organisational accounting, financial statements, payroll)

As many as35% of interviewed managers are convinced that the financial minimum topic should definitely be included in the programme. On the other hand, 29% of respondentsare rather not in favour of including this topic, and 10% are completely against it. The topic should include basic concepts, contexts, tips on what to look out for in schools and obligations imposed by law.

Personal initiative in professional development (DVPP)

From this part of the analysis, it is evident that 26% of respondents are in favour of including a topic dealing with the growth of professional development within the further education of pedagogical staff. Another 27% are rather in favour of inclusion, 27% of respondents think that this topic can be omitted, and only 2% are resolutely against it. In addition, there are 18 % of leading pedagogical staff who are unable to assess the classification. The topic should include detailed instructions on how to develop, step-by-step, and how to protect oneself from burnout.

Introduction to security management

The answers to this point in the survey of analysing education needs of leading pedagogical staffare quite balanced, and mainly up to 27 % respondents could not assess whether to include safety management in the educational module programme; 26% were rather in favour, 27% rather against, and 16% completely against it. The topic should go on to include examples of drug testing, sampling and prevention.

Professional development plans for members of the pedagogical teamwithin human resource management (effective team communication, conflict resolution, work-life balance, search for and finding an authentic leadership style according to one's own personality type, complications, and disorders when managing people)

It is clear from the answers that most of the responding leading pedagogical staffare in favour of including "Professional development plans for members of the pedagogical team within human resource management" – 29% are completely in favour, 43 % of respondents are rather in favour. Twelve percent are definitely against the idea. The topic should include instructions or tips on how a regular pedagogue can participate in management and decision making, how to motivate pedagogues, instructions on how to delegate responsibilities and power to other pedagogues.

Development of pedagogical leadership (transferring experience, expert consultations, reflection on experience)

This area also speaks quite clearly – "Development of pedagogical leadership" should be included in the educational module programme according to the respondents: 25% definitely support the idea, 51% are rather in favour of it. Eighteen percent of respondents believe that this topic should rather not be included.The topic should include the possibility to share experiences.

Implementing new teaching and assessment methods incl. innovative approaches

It is quite clear from the respondents' answers that the topic should definitely be included – at least 43% of the interviewedleading pedagogical staff think so. Only 4% are against including it. According to the respondents, the topic should also include specific steps of the new methods, experiences, visits to other interesting schools with a similar focus. Formative assessment, polytechnics, environmental education, behavioural education and awareness should also be included.

Teaching methods with a focus on curriculum visualisation (mind and concept maps)

Thirty-five percent of respondents are definitely in favour of including it, 33% lean toward inclusion. Two percent of interviewed leading pedagogical staff are definitely against it. According to the respondents, the topic should also include model situations or a seminar should be held with experts on curriculum visualisation.

School as an institution (a school's climate as a basic prerequisite for the school's proper functioning, a network of social relations at all levels and their support – management, teachers, children, parents)

The topic should definitely be included in the educational module programme – that is the opinion of the majority of interviewedleading pedagogical staff. Ten percent of respondents believe that this topic does not have to be included. The topic should go on to include the issue of burnout (escaping to drugs and addictive substances), the possibility of prevention after several years in the profession, experience with a psychologist for teachers, questionnaires, evaluation, compilation of questionnaires, cooperation across all questionnaires, evaluation, compilationof questionnaires, cooperation between parents and teachers, cooperation with everybody, expert panels for parents.

Support for teachers in difficult situations

According to 31% of askedleading pedagogical staff, this topic should definitely not be left out from the educational module programme. Nevertheless, 16% of respondents would not include this topic at all. The topic should also include the current situation in schools and their needs, the possibility of how an external psychologist could help, the possibility of the headmaster supporting the teacher and the authority supporting the headmaster, getting acquainted with first aid.

Mobbing prevention, rules for coexisting at school(relations between teachers, draft teacher code)

Forty-one percent of interviewedleading pedagogical staffbelieve that the topic should rather be included; 4% are completely against it. Respondents go on to suggest that a specific set of rules for coexistence at school be included in the topic.

School as an open institution and part of the local environment(activities outside of school)

The topic spoke to 43% of respondents, who were rather in favour for its inclusion in the educational module programme. Twenty-seven percent of leading pedagogical staffare rather against including it, and 12% would not include it at all. The topic should include concepts and proposals for current events and unconventional activities.

Fundraising or using multi-source school funding

Fundraising was a topic that 33% of respondents would certainly like to know about, 27% of leading pedagogical staffwould rather include it in the educational module programme. However, there are 20% of respondents that are completely against including the topic. According to the respondents, the topic should include tips on how to include this into the school's concept, how to search for resources and how to work with them.

Prevention of risky behaviour on the internet and related phenomena (cyberbullying, cybergrooming, stalking and cyberstalking, sexting, risks of social media networks, social engineering, and other risky phenomena)

More than half of the surveyed leading pedagogical staffwould appreciate seeing the topic in the educational module programme. Eighteen percent of respondents are definitely against the idea.

Results, Conclusions and Recommendations

Based on the meetings of working groups and the evaluated items concerning the inclusion of individual areas of education in either the in-class or distance education parts of the educational module programme, a specific proposal for the content of the study programme was compiled (see Table 1), which is made up of the following topics. When scheduling the time and content for the study programme, the results gained through the analysis in the previous chapter were considered.

Table 1. Proposal of the study programme

Topics	Distance education (theory) (hours)	In-class (hours)
Managing a pedagogical team	2	1.5
Typology of subordinates	0.6	1
Difficult personalities	1	1
Defining people's determinants and limits	0.5	0
Observations	2	0.5
Managing an edu. institution as an incl. school/edu. institution	0.6	0
Defining & fulfilling the vision of school's/edu. institution's devel.	1	1
Application of school legislation according to current legal norm	2	1.5
GDPR	0.5	0
Personal data protection in the school environment	0.5	0
Keeping documentation	0.5	0
Administrative law	2	1.5
Labour law	2	1.5
Education Act	1	1
Possibilities of resolving educational issues in schools	0.8	0
Observing compulsory school attendance	0.6	0
OHS	0.5	0
Financial minimum	0.7	0
Personal initiative in professional development	0.5	0
Introduction to security management	0.5	0
Prof. development plans for members of the pedagogical team	0.6	0.5
Development of pedagogical leadership	0.7	0.5
Implementing new teaching and assessment methods incl. innovative approaches	0.7	0
Teaching methods with a focus on curriculum visualisation	0.7	0
School as an institution	0.7	1.5
Support for teachers in difficult situations	0.6	0
Mobbing prevention, rules for coexisting at school	0.5	0
School as an open institution and part of the local environment	0.5	0

Fundraising or using multi-source school funding	0.6	0
Prevention of risky behaviour on the internet and related phenomena	0.6	0

Based on the results of the questionnaires and the answers of the respondents, it was determined that the educational module programme should consist of 12 hours presented in-class, four hours of sharing experiences, and 26 hours of distance education in order to meet the survey participants' requirement that the distance education part must make up for more than half of the educational module programme and also according to Jarvis' recommendations on distance education (p. 198, 2010).

Based on the analysis of educational needs, the aforementioned results show that headmasters of schools and educational institutions prefer their further education to include topics in the fields of pedagogical management, finance and law.

DISCUSSION AND SUGGESTIONS

The benefit in creating a new educational programme is in the growth of the professional managerial competencies ofleading pedagogical staffin kindergartens, small schools, elementary schools, secondary schools, children's homes, child protective services, and institutions offering leisure activities. Furthermore, benefits can be seen in improving the strategic approach to the management of schools and educational institutions.Similar topics belonging to headmasters' competencies are also published by Trojanová (2014), who defines a competency model for the headmaster of a school.
The specific evaluation of the suggested educational module programme for leading pedagogical staffwill be carried out after its verification in practice, including evaluation by participants. Subsequently, it will be possible to offer this programme to the pedagogues in general.

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The Role of Higher Education in Innovation: The Case of Azerbaijan

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Abstract

The technical and technological progress has become a decisieve term for the development of the national economy and increases the importance of higher education institutions in the modern period of intensification of globalization process. The higher education sector has a large-scale impact on the economy. Its connection with the economy provides commercial value for innovation, and academic instructions and skills help the educated persons and organizations inorder to gain the means of achievements in a knowledge-based economy.

The restructuring of the educational institutions of the 21st century and the application of resource-saving technologies are accompanied by a comprehensive economic, social and environmental approach. All this proves the objective necessity of innovative development in educational institutions, which prevails in the knowledge-based activity of educational institutions.

At present universities are recognized as a research and training centers, supporting entrepreneurship and innovation. Unfortunately, many universities in our country do not have the capacity to serve as an effective dynamic center for such initiatives, and this shortage limits the ability of our local universities to compete with universities of other countries.

The role of higher education in the formation of innovations, the experience of research universities with advanced technology-based infrastructure and the best world practices have been studied in the article. The strengthening of the integration of science and education with industry, fomation of incentive mechanisms for better research and invention, better utilization of available opportunities in higher education have been suggested.

The authors analyzed the current state of the research and innovation environment in the higher education sector, identified the major barriers of research and their application to production, and evaluated global trends in research funding, as well as the impact on the expences of scientific and technical work.

Keywords: Innovation, the innovation index, higher education, research and development expenditure

Introduction

One of the characteristic features of the first decades of the XXI century is the intensification of research in the direction of creating an environment for more efficient use of the opportunities of science and technology. According to the challenges of the millennium, more effective use of the results of scientific and technological progress, the scope of exchange of achievements and opportunities for their use should be expanded. The scientific and technical potential of any country depends on the level of development of its higher education institutions. This potential, in turn, determines the possibility of implementing innovations. İt is evident that the global food problem, the environmental crisis, the intensifying internal urbanization processes, the transformation of non-renewable resources and energy shortages that threatens humanity becoming a real threat is decisively the result of centuries-old stereotypes. It required alternative, above all, creative thinking to eliminate negative tendencies such as consumer attitudes to natural resources and addiction to technogenic resources. Such a way of thinking, as experience shows, can be effective thanks to an innovative approach to purposeful activity. The creation, dissemination, assimilation and application of innovations is a complex process that requires a complex approach. Thus, innovation activity is “a type of systematic activity of the human collective aimed at the full social realization of innovations based on new scientific knowledge, ideas, discoveries and inventions, as well as the use and application of existing and tested scientific technology, systems and equipment." (Schumpeter Joseph A., 1949, p.50).

We should note that, the term "innovation" comes from the Latin word "innovato", which means renewal and improvement. This term was introduced to scientific research by the Austrian (later American) scientist Joseph Schumpeter in the 19th century. In his Theory of Economic Development, published in 1911, for the first time he considered the issue of "new combinations in economic development" (Schumpeter Joseph A., 1949, p.57) and studied the economic impact of technical change.

Innovation describes new or better ways to create value for society, enterprise and individuals. Such a question arises. How does innovation happen? Innovation happens from the creativity and initiative of the individual. Several roles are required for ideas to become innovation: visionary inventors or creators with ideas, consumers and customers who have demands and are increasingly involved in the creation of new products, services and processes. The power of innovation can transform knowledge, experience and ideas into new solutions to meet needs and demands. (De León, L. 2013, p 350-352). Researchers have identified the factors that affect innovation as follows:

- knowledge base developed through research, education or independent learning
- incentives for investment in knowledge and entrepreneurial activity
- demand and markets
- links between organizational forms and participants in innovation processes: enterprises, the public sector, scientists, civil society and individuals
- specialized sources for the development of technology, method, organization or processes (Aghion P., S. Bechtold, L. Cassar and H. Herz (2014).

The main goal of the government in investing in innovation is to build an economy and society based on competitive knowledge. Nowadays, one of the main priorities of the Republic of Azerbaijan is to support an innovative and enterprising economy, create innovative jobs, attract businessmen, scientists and talented young people. Because innovation has an impact on the growth and prosperity of the country's economy. Investments in innovation contributes significantly to the following issues:

- increase in employment, exports and investment;
- competitiveness of the local enterprise;
- placement of foreign direct investment base in enterprises;
- application of new knowledge and technologies ("Education, Science and Culture in Azerbaijan". Statistical journal. 2016).

In recent years, the term innovation has been reflected in various educational strategies. In the 21st century, every individual and society as a whole must learn to live in a constantly changing environment, to keep up with change, and to change themselves. Along with the change in the educational paradigm, there are serious changes in education, because knowledge is one of the main tools in the formation of society and is an integral part of society.

The concept of knowledge in society is closely linked with the development of information and communication technologies. In the educational process, the use of technology is a sign of our time. In addition, technology causes changes in human thinking and perception. Nowadays, issues related to the higher education institutions being innovative are being discussed relatively more than ever before both in Azerbaijan and in Europe and all over the world (Kirschner, Ann, April 8, 2012). Carried out researchs proves that the role of innovation in higher education should be conditioned by three dynamic relationships:

- *Firstly*, the formation of a management system in higher education institutions. Currently, strong strategies are being implemented in the formation of management methodologies in universities around the world.

- *Secondly,* both the renewal and the formation of "creative destruction" (Daron Acemoglu, James A. Robinson, p.212) in the higher education. This means that technological innovations leads to the welfare of society, the replacement of old with new ones leads to the development of higher education.
- *Thirdly*, the discovery of new ways without radically changing of the innovation practice in higher education. This last dynamic connection suggests that before applying an innovation practice, it is necessary to examine whether it is accepted in society. (Hoffman, A. and Holzhuter, J., 2012, p.10-15).

At present, innovation processes in higher education institutions are implemented mainly in the following areas:

- Implementation of scientific and technical programs, covering the fundamental research;
- Financing the research in the field of quality changes and restructuring in order to increase the competitiveness of higher education institutions;
- Active and large-scale application of inventions and discoveries;
- Restructuring of educational institutions etc. (Aghion P., S. Bechtold, L. Cassar and H. Herz (2014), No. 19987).

Method

In the research process, economic-statistical grouping, comparative analysis and the method of least squares were used. The database consists of official data from the State Statistics Committee of the Republic of Azerbaijan, the Global Innovation Index report, data from the UNESCO Institute for Statistics and the World Bank. The data covers the period of 2005-2018.

Findings

As we have mentioned before, innovation activity is the application of new ideas, scientific knowledge, technology and products to various areas of production and management to ensure economic development and competitiveness. In other words, innovation is accepted as the process starting from research and development to the creationg of a new type of product. The Global Innovation Index is used, which allows to assess the application of innovations in the economy of countries and their innovation potential. The Global Innovation Index (GII) report is prepared annually by Cornell University in the United States, INSEAD Business School in France, and the World Intellectual Property Organization. For information, the first report on the index was presented in 2007. The report, presented in 2019, provides a comparative analysis of 129 countries. The Innovation Index is determined on the basis of 2 sub-indices - innovation input sub-index and innovation output sub-index, which includes 80 different indicators (The overall GII score is the average of the Input and Output Sub-Indices).

GII varies in the range of 0-100, approaching to 100 indicates an upper level. Innovation input sub-index is based on 5 sub-indices - institutions, human capital, infrastructure, domestic market development and business development, which are calculated on the basis of 53 indicators that allow to assess the country's innovation potential and innovation opportunities. This sub-index allows you to analyze the aggregate of material, financial, intellectual, scientific, technical and other resources necessary for the implementation of innovation activities. Innovation Output Sub-Indices (based on 27 indicators) reflects two subindexes - the technology development and knowledge, the results of creative activity. Research around the world shows that, global R&D expenditures have been growing faster than the global economy, more than doubling between 1996 and 2016. In 2017, global government expenditures in R&D grew by about 5% while business R&D expenditures grew by 6.7%, the largest increase since 2011. In 2019, Switzerland took the lead in the list of GII (table 1). Switzerland ranks first in the GII for the ninth consecutive year. Switzerland is a world leader in several key innovation indicators, including ICT services imports; PCT patent applications by origin; IP receipts; FDI net outflows; and

Environmental performance. Sweden recovers its 2nd position worldwide this year. Sweden keeps its 1st position in PCT patent applications by origin and IP receipts; and gains the 1st position on patent families (up from 5th). Sweden's areas for improvement include Pupil-teacher ratio, GDP per unit of energy use, Ease of getting credit, GERD financed by abroad, productivity growth, and Printing and other media. The United States of America reaches the 3rd position worldwide, in part due to performance increases and the availability of new U.S. innovation data

Table 1. Global Innovation Index (2019)

Global Innovation Index	Score	Innovation Input Sub-Index	score	Innovation Output Sub-Index	score
Switzerland (1)	67.24	Singapore (1)	72.15	Switzerland (1)	63.45
Sweden (2)	63.65	Switzerland (2)	71.02	Netherlands (2)	57.49
USA (3)	61.73	USA (3)	70.85	Sweden (3)	56.87
Netherlands (4)	61.44	Sweden (4)	70.43	United Kingdom (4)	54.38
United Kingdom (5)	61.30	Denmark (5)	69.33	China (5)	52.75
Republic of Korea (11)	56.55	Republic of Korea (10)	65.95	Republic of Korea (13)	47.15
Japan (15)	54.68	Japan (14)	65.03	Japan (17)	44.32
China (14)	54.82	China (26)	56.88	USA (6)	52.61
United Arab Emirates (36)	42.17	United Arab Emirates (24)	57.65	United Arab Emirates (58)	26.13
Russian Federation (46)	37.62	Russian Federation (41)	49.11	Russian Federation (59)	26.13
Georgia (48)	36.95	Georgia (44)	48.19	Georgia (60)	25.76
Turkey (49)	36.95	Turkey (56)	45.26	Turkey (49)	28.64
Azerbaijan (84)	30.21	Azerbaijan (77)	41.59	Azerbaijan (90)	18.83

Score: The Global Innovation Index 2019: Creating Healthy Lives—The Future of Medical Innovation. Cornell University, INSEAD, and the World Intellectual Property Organization, 2019. pp.35-40

China continues to rise by rising to 14th place from 17th in 2018. According to the report, in some countries, the volume of innovative products and their revenues was more than the investment in them. As it can be seen from the table, even though, China is ranked 26th for the innovation input sub-index, it is ranked 5th for the innovation output sub-index, which characterizes the growth of the production of high-tech products and the expansion of technological capabilities as a whole. According to the report, Azerbaijan ranks 84th out of 129 countries based on the various factors. Compared to last year, Georgia (48th) leaps 11 positions — the highest move in the region. Such improvements are reinforced by Georgia's productivity growth rate where it ranks 8th, positive FDI net inflows (11th), and Ease of starting a business, where it positions 2nd globally. According to the findings of report, most of the technical knowledge is produced in developed countries. 70% of the patented and produced scientific and technical knowledge has been developed by researchers of these countries. Inequality in the production of technical knowledge per capita between developed and developing countries is greater than the income inequality of these countries.

One of the main sub-indices of Innovation Input Sub-Index is human capital and research. This sub-index is one of the indicators characterizing the quality of innovation and is calculated as the mathematical mean of indices, such as education (5 indicators), higher education (3 indicators) and Research & development (4 indicators). regards to the quality of innovation, the U.S. ranks 1st, above Germany, Japan, Switzerland and U.K. Azerbaijan ranks 106th out of 129 countries for the Human Capital & Research sub index. The education index characterizes the development of primary and general secondary education as a whole. It is determined on the basis of the share of education expenditures in GDP, expenditures per student, mean years of schooling and the quality indicators of education. As the objective of our research is higher education, we have summarized the development indicators of education in the table (table 2). The sub-pillar on tertiary education aims at capturing coverage (tertiary enrolment); priority is given to the sectors traditionally associated with innovation (with a series on the percentage of tertiary graduates in science, engineering, manufacturing, and construction); and the inbound and mobility of tertiary students, which plays a crucial role in the exchange of ideas and skills necessary for innovation.

Table 2. Human capital & research sub index (2019)

Azerbaijan	2019 score (17)	2019 rank (106)	2014 score (20.9)	2014 rank (100)
Education	**21.1**	**123**	**29.3**	**121**
Tertiary education	**27.5**	**74**	**21.6**	**99**
Tertiary enrolment, % gross…	27.1	87	20.4	90
Graduates in science & engineering, %	23.6	38	16.2	76
Tertiary inbound mobility, %	2.1	74	2.5	55
Research & development (R&D)	**2.5**	**90**	**11.9**	**63**
Researchers, FTE/mn pop…	n/a	n/a	1292.2	51
Gross expenditure on R&D, % GDP…	0.2	90	0.2	86
Global R&D companies, avg. exp. top 3, mn US$	0.0	43	-	-
QS university ranking, average score top 3	3.7	72	19.2	53

Score: The Global Innovation Index 2019: Creating Healthy Lives—The Future of Medical Innovation. Cornell University, INSEAD, and the World Intellectual Property Organization, 2019. pp 275

The last sub-pillar, on R&D, measures the level and quality of R&D activities, with indicators on researchers, gross expenditure, the R&D expenditures of top global R&D spenders, and the quality of scientific and research institutions as measured by the average score of the top three universities in the QS World University Ranking. The 2019 QS World University Rankings confirmed Massachusetts Institute of Technology as the world's highest-ranked university for a seventh successive year. Stanford University is placed second, and the University of Cambridge is placed third. In table 3, the correlation between sub-indices of human capital and research and GII sub-indices was considered., including human capital and research. The fact that the value of the correlation coefficient is close to the unit, indicates the probability that the relationship between the variables is strong.

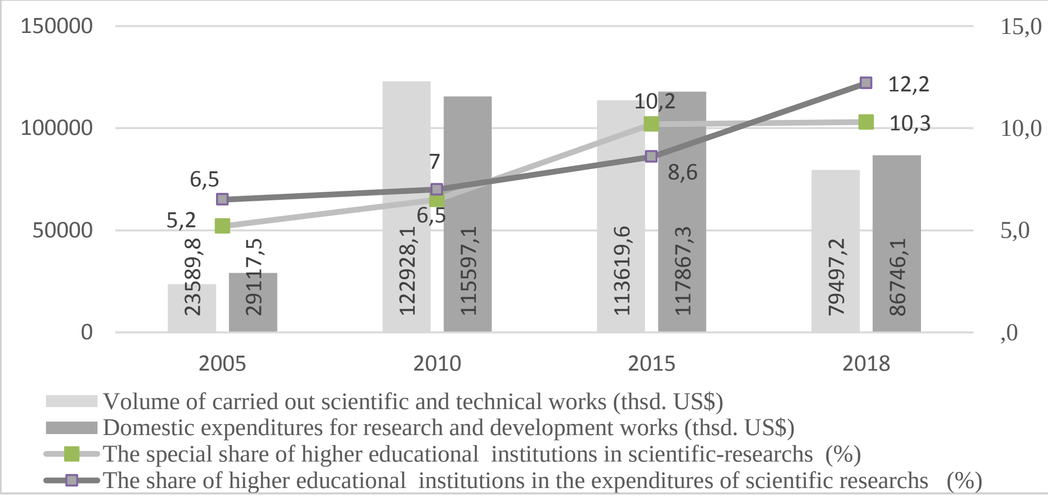
Table 3. Statistical coherence in the GII: correlations between sub-pillars and pillars

	Institutions	Human capital and research	Infrastructure	Market sophistication	Business sophistication	Knowledge & technology outputs	Creative outputs
Education	0.6	0.81	0.61	0.50	0.57	0.55	0.55
Tertiary education	0.62	0.81	0.69	0.52	0.50	0.52	0.56
Research & development (R&D)	0.77	0.88	0.76	0.69	0.88	0.86	0.74
Pearson correlation coefficient with the GII	**0.90**	**0.90**	**0.89**	**0.78**	**0.92**	**0.93**	**0.92**

Score: The Global Innovation Index 2019: Creating Healthy Lives—The Future of Medical Innovation. Cornell University, INSEAD, and the World Intellectual Property Organization, 2019. pp 428

According to the State Statistical Committee of the Republic of Azerbaijan, the volume of carried out scientific and technical work in the country increased by 3.4 times compared to 2005 and amounted to $ 79.5 million in 2018 (diagram 1). The volume of carried out scientific and technical work includes basic research, applied research and development works. Basic research includes experimental or theoretical research aimed at acquiring new knowledge. Their results include hypotheses, theories, methods, and so on. Research and development means scientific activity carried out in order to search for new areas for increasing scientific knowledge and their application. Applied research consists of original works aimed at acquiring new knowledge in order to solve specific practical issues. Applied research identifies possible ways to use the results of basic research, new methods for solving previously formed problems. Developments include routine work, which is based on existing knowledge gained through research and experiments and aimed at creating new materials, products, processes, devices, systems or methods [http://www.upm.ro/gidni/?pag=GIDNI-04/vol04-Cpe]. The purpose of studying the fundamental sciences is to gain new knowledge about realities and to get closer to the truth. Applied science's main task is to apply the acquired knowledge to reality, to create a system of new technologies. Technical progress depends on science as the scientific knowledge penetrates technology more and more. Technology becomes a new quality, and previous technology, practical knowledge and practical skills lose their significance according to the large-scale applications of each new scientific achievement. The 51,8% share of the carried out work was on basic research and 48,2% was on research and development.

Diagram 1. The volume of carried out scientific research and its costs



Score: https://www.stat.gov.az/source/education//

At present, there are 52 (40 public, 12 private) higher education institutions in Azerbaijan. It should be noted that, at the beginning of independence yearS, the corresponding figure was only 17 in 1990. During the past period, the volume of carried out scientific and technical work by higher education institutions has increased by 6.8 times. The value of works carried out by higher education institutions in 2005 was $ 1.2 million, and in 2018 it was $ 8.2 million. The share of higher education institutions in the total scientific and technical work carried out was 5.2% in 2005 and 10.3% in 2018.

According to the assessment of UNESCO Institute for Statistics, the top five in the world for R&D expenditure are the United States ($ 543.2 billion PPP), China ($ 496 billion PPP), Japan ($ 175.8 billion PPP), Germany ($ 127.1 billion PPP) and Korea (89.8 billion PPP $). Expenditures on scientific research in Azerbaijan increased almost 3 times compared to 2005 and reached $ 86.7 million in 2018. In 2018, 55.5% of expenditures were directed to basic research, 17.8% to applied research and 26.7% to development work. Unlike basic research, applied research is more likely to be transformed into new products and processes relevant for the country's economy. Expenditures on scientific research are formed mainly at the expense of public funds, business investments and higher education institutions. In 2005, 72.7% of R&D expenditures fell to public funds, 20.8% to the entrepreneurship sector, and 6.5% to universities. During the past 13 years, expenditures directed to R&D from all sources have increased, in 2018 the share of the public sector was 85.3%, the entrepreneurial sector's share was 2.5%, and universities' share was 12.2%. In developed countries, the business sector dominates R&D investment. Because the success of a business depends on the level and speed of creating a new idea or product. Structural change in this area requires active public policies promoting the cooperation between public research institutions, universities, and the private sector.

Results, Conclusions and Recommendations

Unfortunately, many higher educational institutions operating in Azerbaijan are not able to compete with the universities of developed countries in the frame of global economy. The results of the conducted analysis in the article show that higher educational institutions have not been able to play an important role in the formation of the country's innovation potential. Due to the rapid breakthrough of science and technology, in many cases, the educational field can not adapt to this development.

On the other hand, high innovation costs and risks, long return on investment in these areas, weak cooperation between research institutes, educational institutions and manufacturing enterprises, etc. such factors limit the innovative activities of enterprises.

For the stimulation of the innovative activity of Azerbaijani higher educational institutions, we recommend the following:

1. Expand the use of competitive funding to increase the quality and relevance of research and development (R&D) in a short period of time;
2. Establishment of scientific research centers and laboratories equipped with advanced technological equipment at universities;
3. To bring the material and technical base in the fields of science, education and production to the level of modern requirements. To provide the normal operation of pedagogical and educational activities in education, to conduct scientific research, testing and application, optimization of "science-production-market" relations.
4. Increasing general public investment for scientific-research works in the medium term, directing and applying more scientific-research works to the universities, promoting of researchs;
5. Promoting the internationalization of scientific research;
6. To provide the formation of human capital in higher educational institutions;
7. Strengthening the promotion of business incubators, startup projects, technology parks within the higher educational institutions.

Plagiarism Rate =14,14%

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University Students' Perceptions on Distance Education Courses

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Abstract
Distance education is a kind of instructional approach that held both synchronously and asynchronously. People and the learning contents are come together thanks to learning management softwares and tools. In these days, COVID-19 forced educators to distance education. In the past, while distance education was labeled as "strange", in this process, "close education" began to be accepted as the new "strange". In 4 months, new models were started to be searched for education in schools. The solution of possible problems brought by intimacy is sought in remote options. However, it is seen that possible suggestions are still sought in "minimum distant" options. This can be attributed to the difficulty of overcoming habits.
The purpose of this research is to determine the perception levels of students from different departments studying at İnönü University towards distance education. The research was carried out in accordance with the screening models, which is one of the quantitative research methods. The sample of the research is İnönü University undergraduate students, and the scale was applied to 586 students who volunteered to access and participate. The data of the research were collected in the spring semester of 2019-2020. The data of the researcher was collected using the Distance Education Satisfaction Survey. According to the results of the research, it was observed that the satisfaction level of the students participating in the research on distance education satisfaction was 47.8% positive over the total score. It can be argued that students are dissatisfied with distance education, prefer face-to-face education and do not favor distance education except for some courses.
Keywords: Distance education, undergraduate students, perceptions.

Introduction

Access to information is among the most important virtues of the information age. Knowledge has never been more intense and close to humans throughout history. This intensity and proximity is possible through the internet (Orhan Karsak, 2019). Thanks to the nature of the Internet to eliminate the distances between individuals, it is a candidate to offer alternative channels to many behavioral patterns that are used to be realized face to face. When the definitions of the internet are examined, the situation that arises in connection with the distant ones has made it one of the indispensable things in education as in every field today. Internet is the biggest helper for the "distant life", which is defined as the new normal.

While the usage areas of the Internet are increasing day by day, the world is approaching to be described as a village with the same speed. Among the working subjects of all fields, reflections of internet technologies generally stand out. Nevertheless, in the studies, the criticism of the current and the beautification of the hoped-for is made. Although there are often positive sides of distance education over a long period of beauties (Şahin & Tekdal, 2005; Sumner & Hostetler, 2002; Schutte, 1997; Rivera, McAlister & Rice, 2002; Molidor, 2002; LaRose, Greg & Eastin, 1998) In the ensuing pandemic process, with the transition to distance education, the wind started to blow in reverse and this understanding, which was previously introduced as indispensable for the conditions of the age, has recently been brought to the fore when people have no alternative (Sığ, 2020; Erfidan, 2019), the success in the control group It is seen that studies with higher rates (Palas Bozkurt, 2019) have started to emerge. On the other hand, there are studies in the literature in which opinions on distance education are positive (Maushak & Ellis, 2003; Yenilmez, Turğut & Balbağ, 2017) and negative (Akbaba, Kaymakcı, Birbudak, & Kılcan, 2016).

Some of these studies (Karataş, 2003; Eroğlu & Kalaycı, 2020) include comparisons of distance education and face-to-face education. According to meta-analysis studies conducted for studies on which one is better (Cavanaugh, Gillan, Kromrey, Hess & Blomeyer, 2004; Allen et al., 2004; Shachar & Neumann, 2010), it is seen that the results are close to face-to-face education and its effect on academic success is not high. .

The concept of "distance education", which has been applied in various ways since its first appearance in the catalog of the University of Wisconsin in 1892, has found itself a place in the literature and scientific research as a manifestation of innovative educational approaches. This concept, which manifests itself in forms such as correspondence education, home work, external work, distance learning and distance teaching, distance learning or distance learning (Kaya, 2002), is also seen in the current period of necessity. In son-me studies it was investigated the effect of distance education of WEB 2.0 technologies in education like Wiki (Heafner & Friedman, 2008; Pae, 2007; Rick, Guzdial, Carroll, Holloway-Attaway, & Walker, 2002; Wichadee, 2010), Blog (Arslan & Şahin-Kızıl, 2010; Hsu & Wang, 2011; Wong & Hew, 2010), Twitter (Junco, Heibergert & Loken, 2011), Facebook (Orhan Karsak, 2016), Virtual Worlds (Barab, Sadler, Heiselt, Hickey, & Zuiker, 2007; Holmes, 2007; Ketelhut & Nelson, 2010; Sourin, Sourina, & Prasolova-Førland, 2006; Villalta et al., 2011) and Podcast (Abt & Barry, 2007; Carle, Jaffee & Miller, 2009; McKinney, Dyck & Luber, 2009; Morris, 2010; Putman & Kingsley, 2009; Siciliano, Jenks, Dana & Talbert, 2011). On the other hand, Orhan Karsak (2017) and Kazu & Yeşilyurt (2008) state that teachers do not use these application adequately in education. This reduces the possible contribution of distance education.
In face-to-face training, problems such as inefficient use of time, polluting variables that prevent turning potential into performance, flexibility and hygiene that are noticed with COVID-19 come to the fore.
Properly created distance education projects can be an extremely advantageous and feasible approach to distance education. However, the harmony of theoretical and practical perspectives is important in both face-to-face and distance education. Considering that the benefit of distance education prepared in accordance with the theoretical foundations will be high, the data collected on the level of satisfaction of students in this process of educational institutions that have to conduct their lessons remotely will mean the evaluation of the educational activities carried out, and will be informative about what kind of measures should be taken in the later stages of the process.
In this study, "What are the opinions of university students on distance education?" It was tried to find an answer to the question, and in this respect, it is thought that it will give an idea for future education and research.

Method
This is a descriptive study conducted in the causal comparison type of the relational survey model. Survey model is a research approach that aims to describe a past or present situation as it is (Karasar, 2012: 77). The universe of this research is restricted to university students who receive compulsory education at first face to face and then remotely. It consists of undergraduate students studying in different faculties and vocational schools in İnönü University. Accordingly, the sample of 586 students reached through appropriate sampling from university students in 14 faculties.

Tablo 1. Distribution of Students by Departments

Departments	n	Percentage (%)
Faculty of Education	154	26.3
Faculty of Engineering	96	16.4
Faculty of theology	95	16
Faculty of Pharmacy	12	2.0
Communication Faculty	7	1.2
Medical School	9	1.5
Faculty of Economics	50	8.5
Faculty of Science and Literature	43	7.3
Faculty of Health	58	9.9
Faculty of Dentistry	2	0.6
Faculty of Sports	13	2.2
Faculty of Law	26	4.4
Faculty of Nursery	16	2.7

Fine Arts Faculty	5	1
Total	**586**	**100**

Research data were collected online through the Distance Education Satisfaction Questionnaire (Balıkçıoğlu, Çınar-Öz, & Işın, 2019). The questionnaire consists of two parts. In the first part, determining the demographic characteristics of the participant; In the second part, 5-point Likert type 28 questions were asked to measure the distance education awareness, the student's perspective and the distance education technological structure. The response options are (1) Strongly Disagree, (2) Disagree, (3) Undecided, (4) Agree, (5) Strongly Agree. While factor analysis was performed for the construct validity of the scale, Cronbach's alpha coefficients were calculated for reliability analysis and the coefficient was found to be 0.922. This value indicates that the data collected are highly reliable. The data were analyzed with the help of descriptive statistics such as frequency and percentage. In these analyzes, which include central tendency and central spread measures, percentage, frequency, mean and standard deviation values are presented. These data were tried to be presented for each item in the questionnaire.

Findings

Under this heading, satisfaction levels of university students towards distance education were analyzed. Then, findings regarding the frequency of students' views on distance education were presented. Table 2 includes descriptive statistics on the internet addiction levels of university students.

Table 2. Average and Standard Deviation Values of the Questions for Distance Education Courses

Items	**Mean**	**SD**
11. I welcome the absence of obligation to attend distance education lessons.	3,68	1,56
20. I believe that the absence of attendance requirement reduces course efficiency.	3,1	1,64
21. Thanks to distance education, I can save my time and turn to other areas of interest.	2,99	1,52
26. I have the facilities (telephone, internet, computer) required for distance education	2,99	1,61
19. I think that the course resources of distance education contain up-to-date information.	2,95	1,36
6. The possibility of repetition in distance education makes learning easier.	2,94	1,46
9.I can easily access the distance education lecture notes	2,89	1,49
14. I know how to use the virtual classroom application	2,67	1,5
2. I follow the distance education lessons regularly	2,66	1,4
12. I can easily convey my questions, ideas and problems about distance education to my advisor.	2,65	1,47
18. I can learn distance education lessons alone	2,53	1,41
16. I have technical problems from time to time in distance education.	2,5	1,47
17. I find the announcements and information in the distance education system insufficient.	2,37	1,5
28. I find it correct to conduct distance education (midterm / final) exams on the internet.	2,28	1,57
24. Distance education I can get answers to the questions I ask in distance education lessons.	2,22	1,33
4. The fact that distance education lessons are independent of time and place makes it easier for me to learn.	2,21	1,44
3. It facilitates my learning since distance education lessons are supported by aural and visual aspects.	2,2	1,3
23. I think distance education exams are easier than formal education exams.	2,19	1,31
10. I can get the necessary technical support for problems in the system.	2,09	1,27
25. The physical facilities provided by the university for distance education are sufficient.	2,07	1,27
7. I regularly follow the distance education lessons during the live broadcast hours in the course schedule.	2,03	1,32
13. I receive e-mails and SMS related to distance education lessons.	1,96	1,35
8. The application of distance education live performance lessons enables me to interact with the lecturer /	1,94	1,19

staff.		
22. I think that distance education can be used in all courses in formal education.	1,92	1,32
5. Distance education offers educational tools that I do not encounter in formal education	1,91	1,24
1. Distance education is an effective way of learning.	1,88	1,14
27. Distance education is a suitable education method for applied courses.	1,61	1,14
15. I think the distance education system is equivalent to formal education.	1,58	1,12

When the answers are examined, it is seen that the rate of participation in the item "I welcome the absence of the obligation to attend distance education lessons (m11)" is the highest. This item with a high level of participation is the most admired aspect of distance education for students. Despite this, the students also agree with the item "I believe that the absence of attendance obligation reduces the efficiency of the course (m20)". Although one of these two items seems to be a positive and a negative feature, it causes the students to comment that they cannot work although they want to work. High participation in the item “Thanks to distance education, I can turn to other areas of interest by saving time (M21)” also shows that they are satisfied with distance education. According to the item "I have the facilities required for distance education (telephone, internet, computer) (m26)", it is seen that although approximately 60% of the students have technical infrastructure, a large proportion of 40% still lacks this infrastructure.

On the other hand, it was observed that the majority of the students did not think that distance education was equivalent to face-to-face education (m15) and they thought that "distance education is not a suitable education method for practical courses (m27)". Considering that there is a low level of participation in the items "Distance education is an effective learning method" and "Distance education offers educational tools that I do not encounter in formal education", it can be concluded that faculty members do not turn to innovations in this process and continue to present content without adding new ones to the existing process.

Table 3. Distrubution of answers to items

Item		**Strongly Disagree**	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**	**Total**
1. Distance education is an effective way of learning.	**f**	308	23	8	1	14	586
	%	52,6	22,6	13,1	7,3	4,1	100
2. I follow the distance education lessons regularly	**f**	166	130	112	96	82	586
	%	28,3	22,2	19,1	16,4	14	100
3. It makes it easier for me to learn since distance education lessons are supported by aural and visual aspects.	**f**	244	135	105	52	50	586
	%	41,6,	23	17,6	8,9	8,5	100
4. The fact that distance education lessons are independent of time and place makes it easier for me to learn.	**f**	283	99	75	55	74	586
	%	48,3	16,9	12,8	9,4	12,6	100
5. Distance education offers educational tools that I do not encounter in formal education	**f**	324	110	77	33	42	586
	%	55,3	18,8	13,1	5,6	7,2	100
6. The possibility of repetition in distance education makes learning easier.	**f**	143	101	109	117	116	586
	%	24,4	17,2	18,6	20	19,8	100
7. I regularly follow the distance education lessons during the live broadcast hours in the course schedule.	**f**	305	110	74	45	52	586
	%	52	18,8	12,6	7,7	8,9	100
8. The application of distance education live performance lessons enables me to interact with the lecturer / staff.	**f**	302	118	100	34	32	586
	%	51,5	20,1	17,1	5,8	5,5	100
9.I can easily access the distance education lecture notes	**f**	158	92	113	103	120	586
	%	27	15,7	19,3	17,6	20,5	100
10. I can get the necessary technical support for problems in the system.	**f**	279	108	108	51	40	586
	%	47,6	18,4	18,4	8,7	6,8	100
11. I welcome the absence of obligation to attend distance education lessons.	**f**	104	45	74	74	289	586
	%	17,7	7,7	12,6	12,6	49,3	100
12. I can easily convey my questions, ideas and troubles about distance education to my advisor.	**f**	195	87	130	78	96	586
	%	33,3	14,8	22,2	13,3	16,4	100

13. I receive e-mails and SMS related to distance education lessons.	f	342	78	66	49	51	586
	%	58,4	13,3	11,3	8,4	8,7	100
14. I know how to use the virtual classroom application	f	196	92	106	91	101	586
	%	33,4	15,7	18,1	15,5	17,2	100
15. I think the distance education system is equivalent to formal education.	f	425	67	42	20	32	586
	%	72,5	11,4	7,2	3,4	5,5	100
16. I have technical problems from time to time in distance education.	f	93	69	89	121	214	586
	%	15,9	11,8	15,2	20,6	36,5	100
17. I find the announcements and information in the distance education system insufficient.	f	95	48	90	98	255	586
	%	16,2	8,2	15,4	16,7	43,5	100
18. I can learn distance education lessons alone.	f	203	100	123	89	71	586
	%	34,6	17,1	21	15,2	12,1	100
19. I think that the course resources of distance education contain up-to-date information.	f	123	96	145	130	92	586
	%	21	16,4	24,7	22,2	15,7	100
20. I believe that the absence of attendance requirement reduces course efficiency.	f	199	59	95	70	163	586
	%	34	10, 1	16,2	11,9	27,8	100
21. Thanks to distance education, I can save my time and turn to other areas of interest.	f	158	67	124	99	138	586
	%	27	11,4	21,2	16,9	23,5	100
22. I think that distance education can be used in all courses in formal education.	f	347	78	75	34	52	586
	%	59,2	13,3	12,8	5,8	8,9	100
23. I think distance education exams are easier than formal education exams.	f	270	69	162	35	50	586
	%	46,1	11,8	27,6	6	8,5	100
24. Distance education I can get answers to the questions I ask in distance education lessons.	f	255	106	121	51	53	586
	%	43,5	18,1	20,6	8,7	9	100
25. The physical facilities provided by the university for distance education are sufficient.	f	285	102	112	47	40	586
	%	48,6	17,4	19,1	8	6,8	100
26. I have the facilities (telephone, internet, computer) required for distance education	f	164	96	77	79	170	586
	%	28	16,4	13,1	13, 5	29	100
27. Distance education is a suitable education method for applied courses.	f	422	57	56	17	34	586
	%	72	9,7	9,6	2,9	5,8	100
28.I find it correct to conduct distance education (midterm / final) exams on the internet.	f	308	58	70	48	102	586
	%	52,6	9,9	11,9	8,2	17,4	100

When the frequencies of the responses given to the items are examined, "I think that the distance education system is equivalent to formal education (m15)" and "Distance education is a suitable education method for applied courses (m27)", as well as the "lack of obligation to attend distance education lessons" (m11) "and" I find the announcement and information in the distance education system insufficient (m17) "items are observed to be highly agreed. On the other hand, it is seen that students' views on distance education are generally negative (47.8%)..

Conclusion, Discussion and Suggestions

Students' views on distance education are largely low, it is seen that they think that distance education applications are not effective, that face-to-face education continues to have its negativities, but that its positive aspects are not reflected in this process. This result is similar to the results of recent studies by both Sığ (2020) and Erfidan (2019). It was also observed that a great proportion of university students, such as forty percent, stated that they do not have sufficient equipment for distance education. Accordingly, it can be argued that universities should provide students with the necessary infrastructure as a precaution against such results.

Based on the results obtained, it can be suggested that lecturers speed up the adaptation process in order to be more beneficial. In this regard, what kind of dissatisfaction there are should be determined by in-depth research and appropriate measures should be taken. It can be said that there is a need for the preparation and implementation of programs and course contents suitable for distance education and for researches. On the other hand, instructors may try to use communication channels more actively and efficiently.

Plagiarism Rate: 10%

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Knowledge of the Corporate Social Responsibility Concept as a Part of the Intellectual Capital of Small and Medium-sized Organizations from the Perspective of Lifelong Learning

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Abstract
The concept of corporate social responsibility (CSR) can be understood as a part of the intellectual capital (IC) of organizations, as a set of tacit knowledge of CSR holders transferred into the form of explicit knowledge recorded in the documents of organizations. The aim of this study, in terms of lifelong learning, is to determine whether CSR is a part of the IC, whether the knowledge of the CSR concept is of a tacit or explicit nature and to what extent the potential of such knowledge is used by small and medium-sized organizations (SMEs).
The presented data are a selection taken from 3 studies carried out by the authors in 2014-2019. The study was conducted in the Olomouc region, SMEs were the respondents, and the content of the study referred to CSR. The data show that a tacit form of knowledge of the CSR concept prevails.
Keywords: CSR, SMEs, intellectual capital, knowledge, lifelong learning

Introduction

At present, the concept of an ethical approach to business, the so-called Corporate Social Responsibility (CSR), is a part of the global concept of continuous sustainability declared by the UN in the development objectives for the next 15 years (2015-2030). The CSR concept is closely connected to the issues of economics, management, ecology, human resources management, legal issues, public interest, and business ethics (Garriga & Méle, 2004). In theory, there is a distinction between the so-called internal dimension of CSR which concerns access to employees in organizations in the form of investments in the development of human resources, health and safety at work, change management, environmental impact management and the so-called external dimension of CSR which in turn focuses on the organizational environment, specific region, business partners, suppliers and consumers as well as human rights and global environmental issues (Den Hond, De Bakker & Neergaard, 2007; Pavlík & Bělčík, 2010).
When viewing CSR as a process taking place in practice, in the environment of specific organizations, it is applied on the axis**:** individuals' values – ethical reflection – decisions of the management of organizations – specific activities – success of organizations (Pokorná, 2012). Therefore, the individual and human factor are the basis for implementation of the CSR concept and success of the whole organization. Its position on the market and profit are the result of the process. CSR – the concept of the ethical approach to business is a part of the intangible capital - the intellectual capital (IC)[1] in the form of knowledge that can be used to create value – a sustainable value according to current requirements. The holder of the IC in the form of knowledge is the human

[1]Intellectual capital, which is one of the components of the organization's intangible capital, can be understood as the difference between the market and book value of the organization. The IC forms an interconnection of the human capital as the holder of the so-called tacit knowledge and the organizational capital, or structural capital, the so-called explicit knowledge (these are the mechanisms and processes supporting the explicitly formed knowledge). Social capital in the form of internal interaction and communication in an organization transferring tacit and explicit knowledge then completes the IC as a functional unit. Relational or customer capital is a part of the IC according to some concepts - a sum of contacts and relations with customers, partners, suppliers, owners, and investors mainly in the ethical form (according to Karl Erik Sveiby).

capital (individuals)[2]. Consequently, the success of the organization lies in the connection between the human capital and organizational capital (organization management tools)[3] (Bontis et al., 1999). Bueno et al. (2002) and Ramírez (2007) consider the IC to be the total of explicit and tacit knowledge. The IC in the field of CSR constitutes of the interconnection between the human capital as the holder of the so-called tacit knowledge about CSR and the organizational capital, the so-called explicit knowledge, recorded in the documents of the organization.

There is a consensus on the assumption that the human capital is the most important part of the IC. It is capable of changing and learning, as a result affecting the other components of the IC to the greatest extent. The development of other parts of the intellectual capital without the appropriate human capital is considerably limited (Hemmati & Zamani, 2012). This idea is also supported by the fact that in a highly competitive environment of the global market, knowledge that is not normally available or is often related only to its holders has become more important. The use of knowledge increasingly differentiates the results of the successful businesses from their competitors. Therefore, the tacit knowledge contained in the potential and capabilities of the human factor is of particular importance. The development of the human factor potential is of the same particular importance.

The strategy as the certain knowledge and procedures incorporating the mission, i.e. visions, objectives, and philosophy, which are intended to meet the main objectives of the organization (Truneček, 2003), is a part of the organizational capital as formalised explicit knowledge and intangible assets that are generally owned by the organization. When developing the strategy, it should be remembered that "if the company wants to be successful in the long-term, it must take care not only of generating maximum profit today, but also of satisfying internal and external current and future customers as well as implementing the efficient organization of internal production and management processes and improvement of the qualifications of its employees" (Truneček, 2003, p. 120). Thus, the IC plays an increasingly important role in creating sustainable development of the organization (Kaplan & Norton, 2004). The ability to identify the intellectual capital, record it, and evaluate it, and as a result the ability to further develop it becomes a significant competitive advantage. (Stewart 1997; Kang & Snell 2009; Bontis et al., 1999).

Small and medium-sized enterprises (SMEs) represent the majority of economically active entities in Europe and form the basis of Europe's economy by representing more than 95% of the total number of companies (Ayyagari et al., 2011 in Edinburgh Group, 2012). They are the most dynamically developing companies. 23 million of SMEs generated EUR 3.9 billion in added value and employed 90 million people in 2015 (Annual Report on European SMEs, 2015/2016). SMEs play an important role in the development of the endogenous potential of individual regions of the Czech Republic as they constitute the basis for the regional business (Ministry of Industry and Trade of the Czech Republic, 2013). Large organizations comprise only 0.2% of the total number of companies in the Czech Republic (Válová & Formánková, 2014). They are involved in the development of regions only to a lesser extent; however, they still achieve benefits that are neither necessary nor needed in the region (Vojík, 2010). On the other hand, if small businesses do not want to be unemployed, they do business with the so-called economic forcing. The failure of small organizations and consequently their non-engagement in the CSR is due to their reluctance to voluntarily fulfil obligations beyond the necessary scope of their activities (Vojík, 2010). Activities which are not directly related to the subject-matter of entrepreneurship as well as the legislative requirements of the state are burdensome for SMEs. SMEs have some specific features and, according to Enderle (2004 in Dalíková, 2015), they must daily struggle for survival and, as a result, the

[2] From the IC perspective, "human capital represents the human factor in an organization; it is the combination of intelligence, skills, and experience that gives the organization its special character. Employees are capable of learning, change, innovation, and creative efforts and if properly motivated, they ensure the long-term survival of the organization." (Koubek, 2009)

[3] Organizational capital can be understood as a structure that an organization creates to support its employees and as the basis for all their activities. (Luthy, 1998). It provides the tools for its development. Organizational capital can be defined as the knowledge that the organization formulates, systematizes, and internalizes (Ramírez et al. 2007). It includes internal procedures, communication channels, and a whole structure that enables efficient and effective knowledge management and sharing (Euroforum, 1998; Truneček, 2003).

availability of time and resources that they can invest in the CSR area is limited. Therefore, we are focused on the SMEs segment.

CSR, perceived as the value framework of SME's entrepreneurship and the motivation to do more than just basic business, represents the tacit knowledge in SMEs. CSR, as a part of the organization strategy, organization management tools, implementation, monitoring, reporting, and measurement of CSR in the organization represents the explicit knowledge in SMEs. It is clear that samely as evaluating the IC, it is necessary to also measure the CSR-related activities in SMEs and to monitor in which form of the IC knowledge (tacit or explicit) is represented.

The aim of this study is to determine whether CSR is a part of the IC, whether the knowledge of the CSR concept is of a tacit or explicit nature and to what extent the potential of such knowledge is used in SMEs.

The research questions are:

1. What is the level of knowledge of the CSR concept in SMEs? Which its form prevails?
2. What motivates SMEs to implement the CSR activities?
3. Is the IC related to the CSR concept used sufficiently?

Research Methodology

The presented data are a selection of 3 studies carried out by the authors[4] in 2014-2019.

The research activities have been realized within the common territory (the Olomouc region) including respondents from the region (SMEs), and content (CSR). Although this is not a representative study, the found data sufficiently illustrate the issue under examination.

Research No. 1 (2014): An electronic questionnaire survey called *Focus on Small and Medium-Sized Enterprises or Corporate Social Responsibility in the Olomouc Region* (351 respondents) was carried out.

Research No. 2 (2015-2018): A questionnaire survey was carried out by the MVSO students within the framework of the CSR project teaching[5] (81 respondents).

Research No. 3 (2019): In the pre-research process (from January to February 2019) non-standardized interviews for 75-profit and 75 non-profit organizations of SME type in the Olomouc region in order to identify the differences between the two types of organisations according to the questionnaire part of the CSR methodology ETA index 2019[6] were conducted.

Results, findings

Research No. 1:

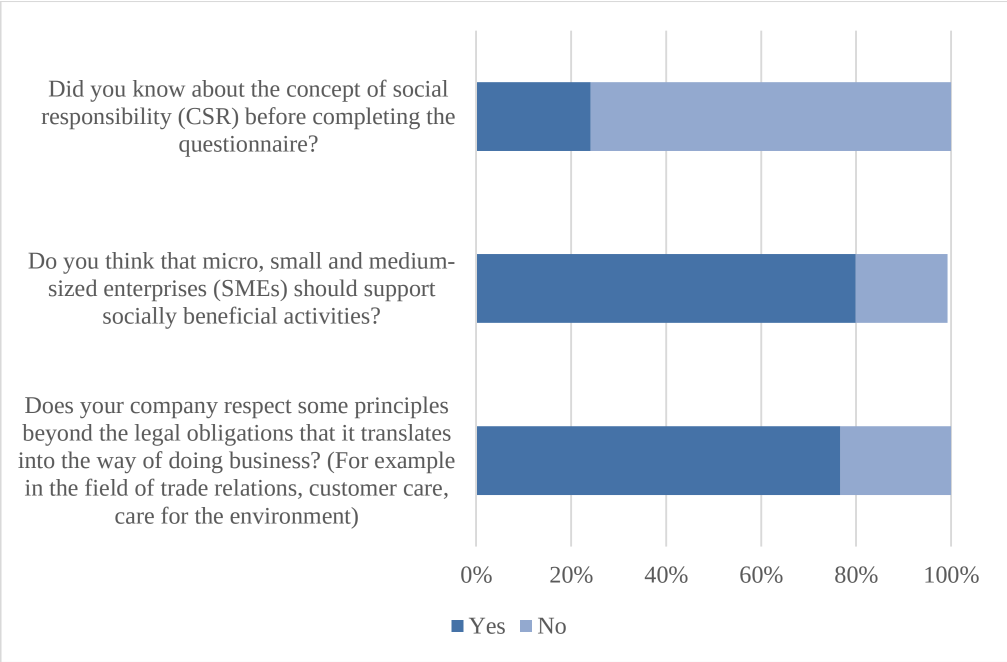
The SMEs in the Olomouc region were asked: 1) whether they know the CSR concept 2) whether they should support socially beneficial activities, 3) whether they respect any principles that go beyond their legal obligations in implementing business, see chart 1.

[4] The authors carry out the study in the environment of MVSO in the Olomouc region. Moravian Business College Olomouc (MVSO) is a private higher education institution founded in 2005. CSR is one of the key areas in both science and education. MVSO is located in the regional capital of Olomouc, in the central part of one of the regions of the Czech Republic. The Olomouc region is situated in the central part of Moravia and extends to its northern part. Its area ranks among the smaller regions, occupying the eighth place among 14 regions in the Czech Republic. The Olomouc region is the sixth most populated region in the Czech Republic. The region's economy is focused on traditional agriculture, manufacturing, and services. The strategically advantageous location, transport accessibility, well developed infrastructure, sufficiently skilled workforce, and the entry of foreign investors are the preconditions for the further development of the region.

5 The MVSO students receive formal education and within the theoretical school preparation they also process their own CSR activity proposals for SMEs in the form of written projects. Subsequently, the students (in the form of non-formal education) carry out the selected projects in teams in cooperation with SMEs from the Olomouc region. The students and cooperating SMEs fill in an electronic questionnaire (as a form of learning evaluation) after implementing the project. The statistical processing of data via online application SurveyMonkey is the method of data collection and analysis. The results are arranged in linear time series (Littschmann, 2010). The time series show the process from the past to the present and can capture developing trends. This research includes the period of four years (2015 to 2018), with a total of 81 respondents (2015 - 21; 2016 - 18; 2017 - 21; 2018 - 22). For more information see EMI 2019.

[6] Creation and testing of the CSR Index methodology by the MVSO staff was implemented within the TAČR project No. TL02000336 and was published see Fink et al. (2020).

Chart 1. CSR in the Olomouc region



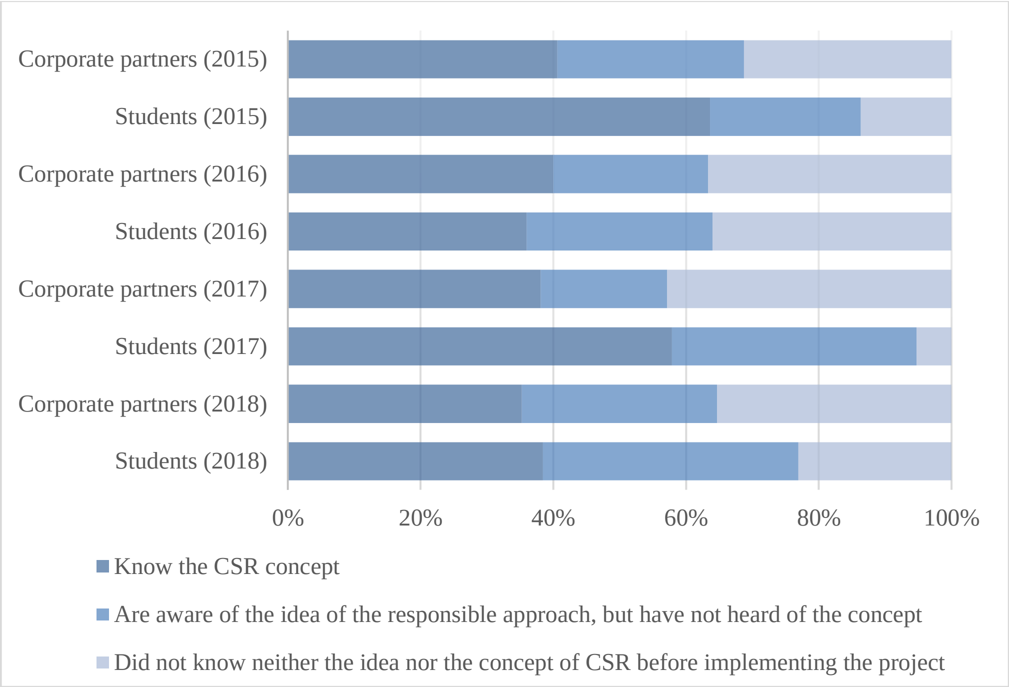
Data Source: Research No. 1

Although only 23.7% of respondents report on knowing the concept of Corporate Social Responsibility (CSR), the vast majority (92.1%) fulfils the concept naturally. 47.2% of the SMEs systematically deal with social responsibility. The majority of respondents (79.8%) think that micro, small, and medium-sized enterprises should support socially beneficial activities and more than three quarters of firms (76.76%), involved in the research, respect some principles that go beyond their legal obligations.

The data show that the knowledge of CSR in SMEs as a part of the IC prevails in the tacit form.

The development of knowledge of the CSR concept was also traced in the following period, see chart 2. MVSO students cooperate with SMEs in implementing CSR projects within the CSR project education. The following evaluation of the CSR project education is approached as a questionnaire survey, which asks both students and representatives of SMEs about the knowledge of the CSR concept. The chart shows the results found out during the four years of evaluation of the CSR project education.

Chart 2. Knowledge of the CSR concept

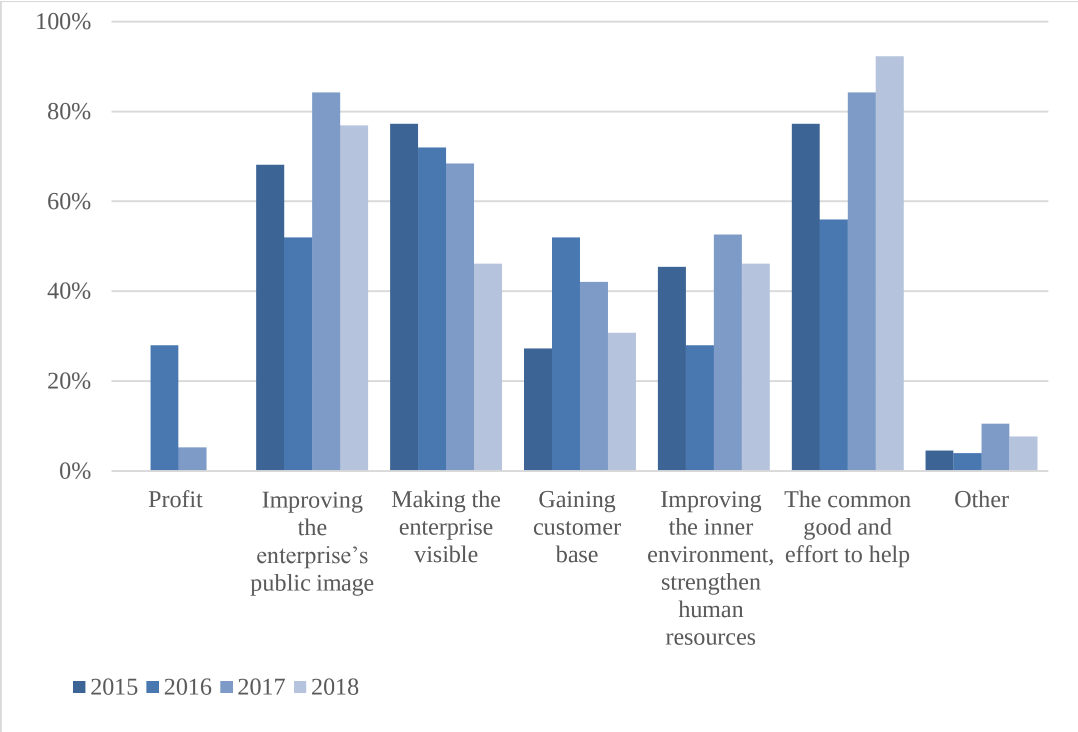


Data Source: Research No. 2

The chart shows that the students' knowledge of the CSR concept reaches higher values than that of the SMEs partners which is most likely due to current knowledge of the concept of students from school education. On the part of the SMEs partners, there is a recurrent strong unfamiliarity with the CSR concept before the CSR project implementation with students. Students are able to identify the principles of CSR in the given organization and in an informal way teach it about using the CSR concept.
The data show that the knowledge of CSR in SMEs as a part of the IC prevails in the tacit form.

Research No. 2:
After the knowledge of the CSR concept in SMEs is established, the next logical step in the research is the question of the motivation of SMEs to implement the CSR activities, see chart 3. The chart shows the results found out during the four years of evaluation of the CSR projects teaching at MVSO.

Chart 3. Motivation for implementing the CSR activities



Data Source: Research No. 2

Respondents' responses show that the prevailing motive is the visibility of the enterprise and the effort to do good. The surprising fact is that the least mentioned motive is profit.
This fact clearly shows that the tacit form of CSR knowledge prevails in SMEs.

Research No. 3:
Chart 4, which follows the structure (sustainability strategy, economic part, social area, environmental area) of the ETA Index CSR 2019 or SREI (Social Responsibility Eta index), shows the scope for improving the CSR area in the organizations in all the monitored segments. This is also related to education in the same area.

Chart 4. Percentage gains in each CSR area

Data Source: Research No. 3

According to the findings, the reporting segment, certification, and CSR policies have the greatest potential for improvement. A relatively little potential for improvement has been identified in the management sector, marketing, and environmental policy.

It can be argued that the potential of the IC represented by the CSR issue is not being used as it could be. Due to the size of the potential for further development in the field of CSR reporting, certification, and CSR policy, it can be argued that the largest reserves are in the explicit form of CSR knowledge in SMEs. There is a space to turn the tacit knowledge, contained in the ability to cooperate with the region, in the ethical relation to customers and suppliers into the explicit knowledge contained in reporting, CSR policy, and formulation of values.

Discussion

The CSR activities must be seen as an investment, so they must ultimately make a profit in the current highly competitive environment (Friedman, 1970). The concept of CSR as a natural need to do good is highly ethical and socially agreeable, but insufficient to strengthen the market position. At the same time, a well thought out link between the responsible approach and organisation's strategy is the subject of the current concept of the CSR concept[7].

The volume of tacit and explicit knowledge of the CSR concept in SMEs of the Olomouc region shows the underused potential for SMEs for achieving higher profits. It is obvious that one way to achieve better economic results and sustainability in SMEs is to turn the tacit knowledge into explicit knowledge. Solution lies in educating entrepreneurs and managers of SMEs not only in the CSR issue, but also in the issue of internal

[7] The UN states that: *"Corporate sustainability is imperative for business today – essential to long-term corporate success and ensuring that markets deliver value across society. To be sustainable, companies must do five things: Foremost, they must operate responsibly in alignment with the universal principles and take actions that support the society around them. Then, to push sustainability deep into the corporate DNA, companies must commit at the highest level, report annually on their efforts, and engage locally where they have presence."* (UN, 2014, p. 7) The definition by Rasche et al., (2017) says: *"CSR policy acts* as a *self-regulatory* mechanism by which the company *monitors and ensures its* active *compliance* with the legal *spirit, ethical standards, and national or international standards."*

procedures, communication tools and channels, and the whole structure of the tools for managing organizations that are subject to the organisational capital, i.e. the holder of the explicit knowledge in the organization.
Two forms of an interconnection between the CSR concept and lifelong learning can be seen according to Pokorná (2012). According to the first form, CSR is a natural part of the moral values of each person which they learn in the process of education (in its broader sense). This form of learning was also reflected in the results of the presented research. SMEs implement the CSR activities explaining it by the effort to do good even though they do not know the CSR concept. According to the second form, CSR is a part of contemporary life, and citizens in their personal life or as employees of different organizations, as well target groups of managers and entrepreneurs must learn (in its narrow sense) to understand and apply it in practice. It is necessary for SMEs to deliberately support the intentional learning process. The process of lifelong learning (LLL) of employees, managers, and entrepreneurs in SMEs plays an important role. This process can be focused on the method of deliberately organized education, i.e. on purpose-built educational events as well as incidental learning from unintentional and random situations as part of the other activities. Incidental learning occurs mainly in practice during the performance of work activities. It can be more effective than intentional learning aimed at CSR educational objectives and can certainly be used in educational practice by choosing optimal methods for education.
In order for the IC to be properly controlled, it must also be measured. The methodology of the CSR indices is used to measure CSR (Kašparová & Kunz, 2013). One of the ways to measure knowledge and activities related to CSR and to educate the employees in the organization at the same time is to use the CSR ETA Index 2019 methodology, which is being prepared by the team of MVSO experts since 2017, currently within the TAČR project. It is a tool not only for indexing all types of organizations, but also for educating and developing the intellectual capital in the field of CSR. It is a self-awareness mechanism setting the CSR index in a simple numerical value according to the achieved points. The questionnaire was prepared based on the standardized valid CSR questionnaire from the European, GRI methodology, ISO 26 000, world professional literature study and the expert conference (see Fink et al., 2020). It provides an overview of all the areas, topics, and activities of CSR that organizations can and should implement with a weight assessment of these areas so that it can show the significance of each of the included item in the CSR concept. The repeated use of the CSR index and the possibility of having an insight into the CSR index of other similar organizations result in educating according to the constructivist method of E-A-R learning (Košťálová & Hausenblas, 2001).

Conclusion

The aim of this paper is to determine whether CSR is a part of the IC in SMEs and in what specific form (tacit or explicit knowledge) it prevails. The data show that SMEs work with the CSR concept applying it in the way of conducting business. The knowledge of CSR in SMEs prevails in the tacit form. SMEs implement socially responsible activities and realize the need for the ethical approach to the surrounding society while not always managing to name this approach as CSR.
The motivation for CSR lies in the visibility of the enterprise and the effort to do good, not in profit. SMEs do not sufficiently benefit from the CSR activities and as a result their competitive advantage on the market is underused.
The IC related to the CSR concept in SMEs has not been sufficiently used yet. It is a significant part of the human capital (in the form of tacit knowledge) and is insufficiently contained in the organizational capital in the form of explicit knowledge.
The LLL strategy focused on SMEs should develop the IC of the learning persons in balance between the explicit knowledge and tacit knowledge. It should effectively and sensitively link intentional and incidental learning, including the possibility of making use of the learning person's own experience. The interconnection of intentional and incidental learning within the E-A-R methodology which the CSR index is purposely based on for CSR measurement and at the same time for education in CSR – ETA Index CSR 2019 is of particular importance in SMEs considering their specifics of entrepreneurship.

Dedication: Project within the Eta 2 Programme of the Technology Agency of the Czech Republic number TL02000336: "*Social Responsibility Index*"

Plagiarism Rate =0%

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What is the Secret to the Success of the Singapore Education System?

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Abstract
Apart from being "the process of creating the desired behaviour change through the individual's own life", education is also the process that prepares the individual for life and leads him/her to a life in harmony with the society. Education enables the individual to connect with life. The general purpose of education is to help growing children and young people to adapt to society in a healthy and productive way. Singapore has accomplished to such an educational goal having attracted attention of the world following her success in international student assessment exams such as PISA, TIMMS and PIRLS in recent years. Singapore's success in international exams that provide information about the results of countries' policies and practices in the field of education aroused curiosity giving rise to a plethora of researches on its education system. In addition to its success in education in recent years, its socio-economic and technological achievements are also at a level that is highly appreciated. The purpose of this study is to examine the Singapore Education System (SES) as well as its features. For this purpose, the main features that stand out in the success of the Singapore Education System were determined through a literature review and a document analysis. Considering these features, the country has a stable and consistent education policies since the very first day it was founded, distinguished teachers created by the policy of teacher selection and training, qualified school leaders with the selection and training policies of school leaders, and information and communication technologies at every stage of the lessons along with effective use, determination on equal opportunities in education, and attaches importance to teaching mathematics, science and technical skills. In addition, the SES reveals that learning environments with a structure in which knowledge and skills are supported by values at every level of education, with the awareness of the importance of values in character formation of the individual as well as the political stability and viewing differences such as religion, race, gender and ethnicity as richness are crucial factors of this success.
Keywords: Education System,Singapore, information technology, leader teacher, leader administrator

Introduction

The quality of the education system is undoubtedly the most significant driving force in the development of a country as the outputs of the education system are accepted as the basic indicator in determining the quality of society and human resources. The success of the education systems of developed countries in economic, technological and social life clearly indicates that this is true. Therefore, the increase in the welfare of the countries and the development of the society are directly related to the education system of that country. Countries that are cognizant of this fact give weight to their education systems and pay due attention to the structuring of every stage of the education system. Countries participate in international exams such as PISA (Program for International Student Assessment), TIMSS (Trends in International Mathematics and Science Study) and PIRLS (Progress in International Reading Literacy Study) to measure the success of their education systems and students as well as to compare them with other countries.

Briefly stated, PISA is test developed by the OECD (Organization for Economic Co-operation and Development) in 1997 and applied for the first time in 2000, which is repeated every three years and in which only 15-year-old children participate. 43 countries and 265.000 students took the test in 2000, 41 countries and 275.00 students in 2003, 57 countries and 400.000 students in 2006, 65 countries and 475.000 students in 2009, 65 countries and 510.000 students in 2012, 72 countries and 540.000 students in 2015, and 79 countries and 600,000 students in 2018. Three fields are tested in PISA including reading skill, science and mathematics.

TIMSS has been applied every four years since 1995 by the International Association for the Evaluation of Educational Achievement (IEA). TIMSS is an international test that includes mathematics and science subjects taken by 4th and 8th-grade students. 41 countries participated in the test in 1995, 38 countries in 1999, 46 countries in 2003, 59 countries in 2007, 63 countries in 2011, 49 countries in 2015, and 64 countries and 580,000 students in 2019. PIRLS is an international test that has been applied every five years since 2001 and measures the reading skills of 4th-grade students with the participation of 35 countries in 2001, 41 countries in 2006, 48 countries in 2011 and 50 countries in 2016.

All these international tests serve only one purpose, which is to determine the degree of effectiveness of educational outcomes by comparing countries and to see their shortcomings. The success of Far Eastern countries such as Singapore, South Korea and Japan stands out in these tests. Being one of the outstandingly performing countries, Singapore has left a mark over the last ten years. Singapore is an island and city-state with a population of approximately 5,639,000, with an area of 728 km2, 137 km north of the Equator, located at the southern part of the Malay Peninsula. Having gained its independence after leaving Malaysia in 1946, it has a per capita income of 64 thousand dollars today and has been chosen as the most competitive country in the world in the field of economy and technology (among 141 countries). When looking at the distribution of beliefs in Singapore, 42.5% are Buddhist, 14.9% Muslim, 14.6% Christian, 4% Hindu, 8.5% Taoist, 0.7% belonging to other religions. Due to the limited geographical area and natural resources, human resources are given great importance in Singapore. The arable agricultural area of the country is almost non-existent at 2%. For this reason, they still make large investments to increase the quality and efficiency of human resources and education systems. The result of all these investments can be seen in a striking and admirable way in the international test results, which are presented in the findings section.

The purpose of this study is to identify the characteristics of the SES and the components underlying its success, to determine the importance and role of education in the development of a country, and to provide examples for different countries regarding situations that can be replicable and give ideas.

Method

This study has been based on a qualitative study designed with descriptive survey and phenomenology model. The descriptive survey model is a research model that aims to describe a past or present situation without changing it, and studies based on phenomenological model are the studies that we realize, but are based on document review and interviews to reach more detailed and in-depth information (Abstract, 2014 : Creswell, 2007). The data obtained were analysed in an inductive structure and in a complex structure with interpretive philosophy and through an approach based on description, interpretation, juxtaposition and comparison based on the analytical method developed by Bereday (1964). As a data collection tool, national and international reports, books, articles and interviews regarding the Singapore education system were created. Primary sources were reached as much as possible in the collection of data. Thus, the main purpose was to increase the validity and reliability of the study.

Findings

In this section, the findings of the research are presented. The factors underlying the success of the SES are as follows;

a. Actions by the Government of Singapore

The Government of Singapore has divided the education system into four stages, which it sees as the most important tool in achieving the goal of becoming an educational nation since the establishment of the country. These are as follows:

Stage 1: It covers the years between 1959 and 1978 and is defined as the survival stage.
Stage 2: It covers the years between 1979 and 1996 and is defined as the productivity stage.
Stage 3: It covers the years between 1997 and 2011 and is defined as the talent stage.
Stage 4: It has been continuing since 2012 and is defined as the student-centred and values-oriented stage.

The Government of Singapore progresses by dividing the education system into a stage in an average of 20 years. To achieve the ultimate goal of these stages, a significant amount of share has been allocated from the budget to provide the necessary finance and investment, and this share has continued to increase. Recently, the share allocated to education from the budget in Singapore is around 20%. The expenditure data per student in primary and secondary education levels in 2012 and 2015 are presented in Table 1.

Table 1. Expenditures Per Student According To Education Levels

Education Level	Years	
	2010	2015
Primary	6.000 $	10.000 $
Secondary	9.000 $	13.500 $

b. Policy for Teacher Training and Selection

Teacher qualification is seen as vital in the SES. For this reason, teachers are trained and selection policies are very sensitive and standard. Teacher training is provided exclusively by the National Institute of Education, Nanyang University of Technology. Student selection for this university is carried out stage-by-stage. First, students must take the Cambridge Advanced Level Examination GCEA, which is applied twice a year by Cambridge University. Candidates selected according to their GCEA results are then interviewed. The interview commission consists of faculty members and school principals. This commission examines the competencies of the following skills of the candidates who will receive teacher education and decides who is eligible to receive education at the university.

- These are as follows:
- Interests and desires towards teaching
- Communication skills
- Ideals and goals
- Belief in innovation and self-improvement
- Learning requests

The teacher candidates who are successful in the interview commission are given an education in which 45% of 4-year courses consist of professional knowledge (pedagogy), 50% of the field knowledge and 5% of general culture, and internship practices are important and predominant. During this process, candidates are given scholarships up to 60% of the salary of a teacher. Teacher candidates who graduate are subjected to the four-stage elimination, which are as follows:

Stage 1: First of all, grade point averages and CVs are scrutinized and those in the percentile of 30% can apply for teaching.
Stage 2: Teacher candidates are subjected to a general culture test.
Stage 3: Teacher candidates are interviewed and subjected to tests that measure their attitudes, behaviours and intelligence. This commission consists of three school principals, who assess the candidates' multi-faceted competency.
Stage 4: Teacher candidates are taken into the education program by the National Institute of Education, being paid with a certain amount of salary. This training is aimed at developing teachers' pedagogical and content knowledge skills. Unsuccessful candidates are eliminated and excluded from the system.

According to the statistics made in Singapore, only 1 out of every 6 people who apply for teaching is eligible for becoming a teacher. In addition, the data on the number of students per teacher is presented in Table 2, and teachers work at schools between 54 and 65 hours per week on average.

Table 2. Number of Students Per Teacher by Education Levels

Education Level	Years	
	2010	2015
Primary	19 students	16 students
Secondary	16 students	12 students

In the SES, teachers are defined as general in the first three years of the profession, senior in the next two years, and super senior in the next eight years. In addition, teachers are subjected to the performance monitoring process throughout their careers and supported by continuous training.

c. Policy for Selection and Training of Principals
In Singapore, principals are trained and selected through a separate training program. Teachers who have the potential to act as principals and to be leaders are regularly included in the evaluation and monitoring process. In this context, some of them are provided with opportunities for the positions of administration (such as being the head of the department).Teachers who are eligible to be appointed as vice principals are selected and taken into training programs organized by the National Institute of Education, which has been operating since 1984. The topics covered in this training are as follows;

- Management skills
- Leadership
- Management of curricula
- A 4-week practical training in school

Principal candidates who have successfully completed these trainings are then taken to the six-month leadership training program given by the National Institute of Education. It includes training about issues such as solving problems encountered in schools within the scope of the training program, writing school renovation and development projects, and international school visits. A limited number of principals (40 people across the country) are recruited to these programs and viewed as future principals. School principals in Singapore are educators in the position of leaders who constantly improve themselves and receive trainings. Considering the profile of school principals more than 70% consists of graduate and doctoral level educators, whose age range is 35 years and above with at least 15 years of professional seniority and a general acceptance in the teacher community.

d. International Test Indicators
Singapore is a country that compares the education system with different countries and checks its deficiencies by participating in international student assessment and evaluation tests such as PISA, TIMSS, and PIRLS.

Singapore is a country that clearly leaves an impression on and is a source of inspiration regarding these international tests. The results of these tests covering more than 10 years are presented in Table 3.

Table 3. Singapore's Rankings in International Tests

Test	Year	Rank	Year	Rank	Year	Rank	Year	Rank
PISA	2018	2	2015	1	2012	2	2009	3
TIMSS	2019	1	2015	1	2011	2	2007	3
PIRLS	2016	2	2011	4	2006	4	2001	15

As can be seen in Table 3, Singapore is a country that has left its mark on all international tests in the last 10 years.

e. Indicators Regarding the Contribution of Education System Outputs to the Country
As is known, the number of patents is one of the important indicators of a country's knowledge economy, R&D and development. The results regarding the added value resulting from the SES are presented in Table 4.

Table 4. Comparison of The Number of Patents Between Turkey and Singapore

Years	Number of Patents	
	Turkey	Singapore
2015	5302	6185
2016	6153	6735
2017	7994	6951
2018	7114	7415
2019	7751	7354

Results, Conclusions and Recommendations
As a result of the examination of the information and documents obtained in the research, it is necessary to be aware of the stages of the education system to understand the success underlying the SES. Considering these four stages, the 1959-1978 survival stage aimed to develop the basic literacy and mathematics skills of every child and attempts to build a nation consisting of individuals of different races and social backgrounds and to ensure social cohesion took place during this period. The development of productivity capabilities was the main objective of the period between 1979 and 1996. One may notice that a uniform education curriculum as well as assessment and evaluation systems suitable for this purpose were developed. During the period of the 1997-2011 talent stage, the education systems gained flexibility by switching from a single-type curriculum to multiple curricula in different types. This flexible curriculum supports the development of skills in accordance with the individual differences of the students. Schools have the capacity of developing curricula based on this flexibility, provided that they are in line with the political goals of the country. During the student-centred and values-oriented stage since 2012, the focus has been on the holistic development of students and their ability to reveal their potential. For almost the last 20 years, Singapore's search to adopt a decentralized approach and the main factor underlying the stretching of the curriculum is to take into consideration the individual differences of students (Tan, 2006). For this reason, since works are carried out by principals and teachers who know the students best, the responsibility and authority of the process has been transferred to these people within the framework of accountability (Lee, Hung & Teh, 2016). In fact, since 1997, the Singapore government has focused on improving students' potential and lifelong learning skills in education policies, seeking to create education systems which have more than one way and which are responsive for the student.

The main purpose of all these policies is to create a nation of high quality and integrated with technology consisting of functional citizens that can solve their problems. It was obvious that achieving this goal could only be ensured by leader school principals and teachers with qualifications of high levels. Therefore, teachers are viewed as the most important figures that may influence the success of students in Singapore. Considered in this context, the quality of the teacher actually determines the quality of the education system in a sense. For this reason, great importance was given to the training and appointment of teachers in a multi-stage manner. According to the select-educate policy in Singapore, selection is essential during the admission of teachers to the four-year faculty at the beginning, after which only one third of the graduates can proceed to the next stage according to their grade point averages and CVs, and provided that eligible ones are successful in the general culture, attitude, behaviour, psychology tests and interviews which are applied in the following stages. Finally, they must be successful in pedagogy and subject knowledge education within the National Institute of Education. The National Institute of Education is the only institution in Singapore that is responsible for teacher education and provides pre-service training of all teachers (Lim-Teo, 2002).

The success of teacher candidates in this whole process is approximately 16% by percentage. Then, the consultancy and coaching system comes into play in the process of training newcomers as teachers. A special importance is given to this system in training teachers. For, thanks to systems such as counselling and coaching, both beginner and senior teachers develop critical thinking, reflective thinking, and creative thinking skills (Ng, 2012: Lim, 2014). Thus, a pool of experts and well-equipped teachers is created. For this reason, the teacher status is very high in Singapore. According to the research conducted by Adecco (2012), children view working as a teacher as the best career followed by working as a doctor and a pilot. In addition, according to the results of the same research, it was stated that 88% of the teachers ware satisfied with their teaching career, and 70% of them find teaching very valuable in Singapore.

Another important factor in the success of the Singapore education system is the leadership qualities of school principals and their contribution. In particular, school principals are very successful in increasing the professional development and school capacity of teachers, and establishing partnerships with stakeholders inside and outside the school. With this awareness, the selection and training of school principals in Singapore is considered as a very important and sensitive process. It is believed that every elected principal should be a school leader. In this context, projects and certified trainings are organized. One of these projects is the International Successful School Principalship Project (ISSPP) (Wang, Gurr, & Drysdale, 2016). Wang, Gurr, and Drysdale (2016) stated in their study that the International Successful School Principalship Project (ISSPP) program has made a very important contribution to the success of school principals.

Consistent policies determined in the government education system in Singapore, success in the selection and training of teachers and principals have transformed education into a system of assurance to meet the country's need for quality human resources and diversity and innovation (Ng, 2007: Ng, 2008). It is also seen that the quality system of assurance is based on parameters such as standardization, design, accountability, practice, and originality for a more visible and manageable possibility (Ng, 2004). The SES aims to provide students with the best opportunities, inquiry and interpretative learning pedagogies, and the follow-up contexts tailored to their needs. It is expected that it is likely to be able to build structures and processes over time by continuously investing in educational research, and also have an excellent education system with its stakeholders. In addition, as a result of the concepts such as autonomy, diversity and flexibility in the education process in schools at the point reached in education, a learning network called learning circle has been created (Salleh, 2006).

As a result of all this, the SES has been given credit for its success in international tests in the last 10 years. This success has been shown to act as an important dynamo in the development of the country. As it is known, the first six countries that are superior in terms of obtaining patents are the USA, Germany, Japan, France, China, and Switzerland. It is no coincidence that these countries are also among the economically leading countries in the world. The increase in the number of patents is the result of a knowledge-based development. Considering the 21st-century as a period of interpretation of knowledge and creating new knowledge based on technology, it is seen that the quality of human resources of the country in development is actually the most important human capital. This human capital reveals the knowledge economy and the development with the added value it provides. It is seen that Singapore has made almost all of its investments in the attempt to increase the quality of human resources and technology by analysing the conditions such as the limitation of agricultural areas (2% of agricultural land), the lack of underground resources, and a limited geographical area.

It is true that the most important tool in increasing the quality of human resources is to improve the education systems. In this context, the Government of Singapore has achieved the aim of creating a nation and society which has gradually developed with per capita income of over 64 thousand dollars by planning its educational policies in periods in short, medium, and long terms. The consistent policies of the government, the multi-stage teacher selection and training policy, and finally, the selection and training policies of school principals are the underlying reasons for this success. Internal and external controls and evaluations of all these stages in a continuous structure explain how sustainable this success is.

As a result, given all these findings, since the first day of its establishment, the country has pursued consistent education policies, thus carried out these policies with distinguished teachers created with the policy of teacher selection and training, qualified school leaders, effective use of information and communication technologies at every stage of the course as well as with determination on equal opportunities and importance attached to teaching mathematics, science, and technical skills. The SES has been quite successful in strengthening individual development and versatility, both at the macro and micro level, as a result of ensuring both horizontal and vertical mobilization (Huixian, 2018).

One may notice that there are learning environments with a structure in which knowledge and skills are supported by values at every level of education, with the awareness of the importance of values in creating character of the individual and that the political stability and viewing differences such as religion, race, gender and ethnicity as richness have been highly influential in these accomplishments.

Plagiarism Rate = 10%

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Examination of Studies in Sustainable Leadership by Bibliometric Analysis Technique

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Abstract

When the literature is examined, it is seen that different leadership models have been developed according to the economic, social, cultural and environmental conditions of the period experienced from the past to the present. The problems faced by the world such as seasonal changes in the world, natural disasters, rapid depletion of resources, economic problems, inequality and discrimination are increasing day by day. It is possible to prevent all these negative problems with global actions only. For this reason, one of the leadership approaches put forward at the organizational level is sustainable leadership. Sustainable leadership can be expressed in the shortest definition as people who take actions that support their economic, social, cultural and environmental systems and ensure their activities to continue in a healthy manner (Ferdig, 2007: 32). In other words, sustainable leaders are not only dealing with environmental and green issues, but also are working on reformative activities in all areas of life. In this context, the notion of sustainable leadership, which is considered to be a considerable current subject, was investigated. The object of the study is to analyze the studies published in the title of sustainable leadership from a bibliometric point of view and to reveal the development in the related subject. Within this scope, 48 studies were examined under the title of sustainable leadership in the Web of Science Core Collection database and bibliometric data of the studies were obtained. In the study, VOSviewer program, which is a Java based working program produced for use in the analysis of bibliometric networks, was used. In addition, Web of Knowledge data was also used in the study. As a consequence of the research; it has been identified that the distribution of the studies carried out under the title of sustainable leadership varies according to the years, the authors, WOS categories of the journals where the studies are published and the countries.
Keywords: Sustainable leadership, sustainability, leadership, bibliometric analysis, VOSviewer

Introduction

The rapidly growing population, high levels of urbanization, economic fluctuations, inequalities and the use of natural resources reveal the need for the concept of sustainability (Cohen, DeFrancia & Martinez, 2016: 231; Hargreaves & Fink, 2004: 3). In this context, it is possible to state that the concept of sustainability is obliged to balance the negative relations between individuals and the world (Ferdig, 2007: 26). People who achieve this balance can be considered sustainable leaders. Although the concept of sustainable leadership seems to be about green and social responsibility, the concept of sustainable leadership actually means much more than these (Avery & Bergsteiner, 2011: 5). Sustainable leadership is a concept that expresses people struggling for healthier and more efficient conditions in economic, social, cultural, ethical and environmental terms (Ferdig, 2007: 32; Pelinescu & Rădulescu, 2011: 85; McCann & Holt, 2010: 205; Tideman, Arts & Zandee, 2013: 30; Hargreaves, 2007: 225; Van Velsor, Morsing & Oswald, 2009: 89). Sustainable leaders constitute the reflection of the notion of sustainable leadership at the organizational level. In this context, sustainable leaders can be defined as those promoting sustainable development, both at the organizational level and at the employee level (Šimanskienė & Župerkienė, 2014: 86-87).

Numerous quantitative studies have been conducted on sustainable leadership, which is a current concept (Lambert, 2011: 134; Suriyankietkaew & Avery, 2016: 5). However, the number of studies where the concept of sustainable leadership is discussed with qualitative patterns is not yet sufficient. In this context, it is thought that it will be important to examine the studies carried out on the concept of sustainable leadership with qualitative patterns and to determine the level of studies on the notion of sustainable leadership today. Accordingly, the response to the succeeding questions will be sought out in the study:

- Q1: Do the distribution of studies related to the concept of sustainable leadership differ by years?
- Q2: How is the distribution of the publications about the concept of sustainable leadership compared to the authors?
- Q3: Do the distribution of the studies conducted on the concept of sustainable leadership differ according to WOS categories?
- Q4: Are the countries where the studies conducted on the concept of sustainable leadership differ?

1. Method

Within the framework of the research questions, the purpose of this study is to determine the point where the sustainable leadership concept has reached today. It is important for the future studies of the concept that such a study is being carried out on sustainable leadership, which is a developing concept. In this context in study, bibliometric analysis technique was used to reveal the trend of the last 16 years in the topic of sustainable leadership. It is seen that bibliometric analysis technique, which is one of the qualitative research methods, has been frequently used by researchers, especially in the studies conducted in recent decades. Bibliometric analysis technique is important in terms of showing the point where the literature has reached. In this context, bibliometric analysis technique was used in the study in order to present the concept of sustainable leadership from a wider perspective (Appio, Cesaroni & Minin, 2014: 624; Ding, 2011: 187; Samiee & Chabowski, 2012: 367-368; Gavel & Iselid, 2008: 8).

In the study, Web of Science (WOS) was used as the web-based online database (Falagas et al., 2008: 339). WOS, which offers online scientific indexing services, contains studies published in the most reputable journals in the academic World (Meho & Yang, 2007: 2105; Martín-Martín et al., 2018: 1160-1161). Since it is suitable for use in software such as VOSViewer developed for bibliometric analysis, WOS was chosen as the database. In the study, between 2004-2020 48 studies in the WOS with the title of sustainable leadership in their title are discussed. In addition, Web of Knowledge Journal Citation Reports was used as another source. Web of Knowledge is an online bibliometric database just like WOS (Shariff et al., 2012: 610). In order to visualize the bibliometric data, VOSviewer program was used in the study. VOSviewer is a program that allows the visualization of data by mapping method (VOSviewer, 2020; Derrick, Meijer & Van Wijk, 2014: 153).

2. Findings

Findings obtained as a result of the research are expressed with the following tables and visual maps. Table 1, which is the first table, shows the distribution of the studies carried out under the title of sustainable leadership by years.

Table 1. Distribution of Publication Years

Publication Years	Record Count
2020	3
2019	6
2018	5
2017	7
2016	6
2015	3
2014	3
2013	4

2012	3
2011	3
Other	5
Total	**48**

When the table is analyzed, it is seen that the most publication in the topic of sustainable leadership was made in 2017. Although it is seen that the number of studies carried out in this title has increased from past to present, there are fluctuations in the number of studies over the years. Especially after 2015, it is seen that there is a remarkable increase in the number of studies in the field of sustainable leadership.

In the Web of Science database, 48 studies on sustainable leadership have been published in the last 16 years. Among all the studies published in the period examined, it is seen that Hargreaves (2004) is the most contributing author in this title. It is clearly seen that the cluster concentrates on Hargreaves (2004) in the visual map in Figure 1.

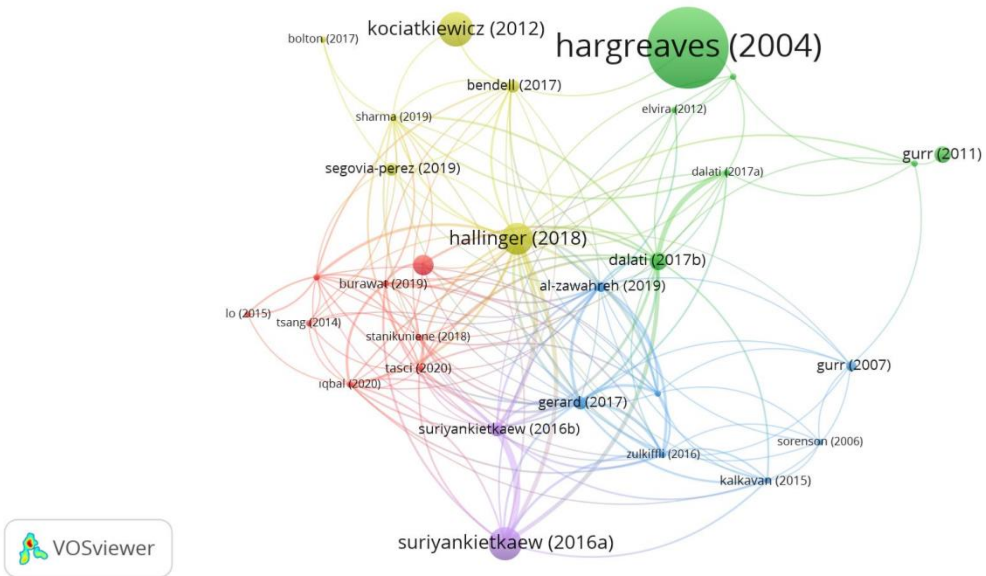

Figure 1: VOSviewer Structure According to Authors

Figure 2 presents the distribution of studies titled sustainable leadership according WOS categories. When the visual map is analyzed, it is seen that the studies titled sustainable leadership are mostly published in the fields of sustainability, management, economy and leadership.

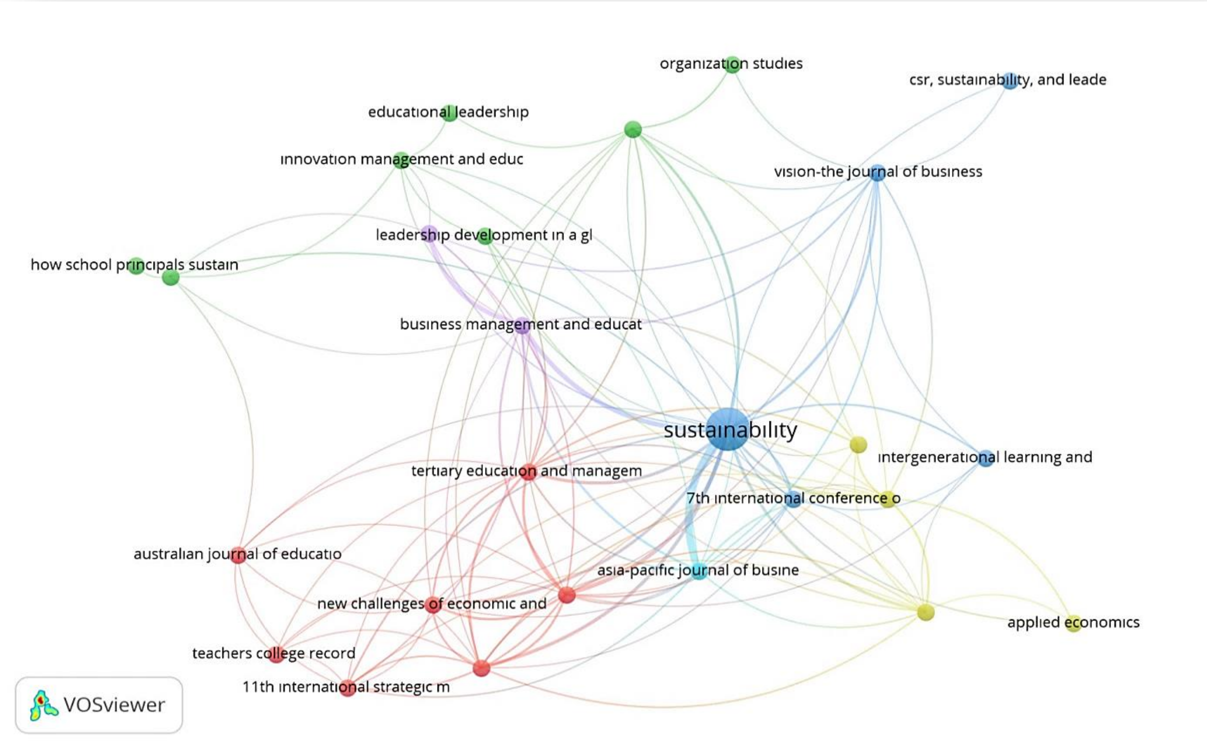

Figure 2: VOSviewer Structure According to WOS Categories

Table 2 which is the below confirms Figure 2. According to the information obtained on the Web of Knowledge, studies on the topic of sustainable leadership are frequently published in the categories of management, education, sustainability and business. Since a study can concern more than one field, the total value can not be reached in this table.

Table 2. Distribution of WOS Categories

Web of Science Categories*	Record Count
MANAGEMENT	16
EDUCATION EDUCATIONAL RESEARCH	11
GREEN SUSTAINABLE SCIENCE TECHNOLOGY	10
BUSINESS	9
ENVIRONMENTAL SCIENCES	7
ENVIRONMENTAL STUDIES	7
SOCIAL SCIENCES INTERDISCIPLINARY	3
ECONOMICS	2
ENGINEERING ELECTRICAL ELECTRONIC	2
Other	16

***Note.** One study can concern multiple fields

The last topic emphasized during the research is how the studies carried out under the title of sustainable leadership are distributed by countries. Although the distribution of the authors carrying out their studies in this area gives an idea about this research question, it is thought that at some point, only the distribution of the authors will be insufficient. In this context, the distribution of the studies carried out under the title of sustainable leadership by country is presented in the table below. (Table 3).

Table 3. Distribution of Published Countries

Countries/Regions	Record Count
USA	7
AUSTRALIA	5
THAILAND	5
BRAZIL	4
CANADA	4
LITHUANIA	4
MALAYSIA	3
SWEDEN	3
ENGLAND	2
INDIA	2
Other	9
Total	**48**

It is seen that in the Table 3, studies on sustainable leadership are mostly carried out in the USA. However, the fact that studies related to this field are carried out in different countries and different continents shows that the concept of sustainable leadership is approached from different perspectives of different cultures.

3. Result, Conclusions and Recommendations

The bibliometric analysis study conducted in the direction of how the studies in sustainable leadership literature developed within the framework of publications in Web of Science (WOS) covers the years between 2004-2020. Between these years, 48 studies in the WOS database were discussed. Examining the distribution of studies related to the concept of sustainable leadership by years, authors, WOS categories and countries the main problems of the study.

As a result of the bibliometric analysis, it is seen that the studies increased especially after 2015. While 18 studies were conducted until 2015, it is seen that 30 studies were conducted after this date. Also it is seen that the most cited study belongs to Hargreaves (2004). It is noteworthy that studies in the field of sustainable leadership are mostly published in WOS categories of sustainability, management and economics. In particular, it is seen that studies are concentrated in studies originating in USA.

As the Web of Science database is updated continuously, different results may occur when this study is repeated in the future. With the increasing importance of the notion of sustainable leadership, it is predicted that there will be an increase in the number of studies carried out on the subject. For this reason, it may be useful to repeat this study in the future and even to support it with different databases.

Plagiarism Rate = %4

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The Mediating Role of Organizational Innovation in the Implementation of Intellectual Capital and Blue Ocean Strategy for Higher Education Sustainability

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Abstract
Nowadays, Intellectual Capital (IC) has a pioneering role in providing university sustainability. The organizational innovation (OI) has a significant impact on the process of implementing blue ocean strategy (BOS) and achieving the expected productivity. The paper analyzes the possible positive impact of OI on IC and BOS relationship in sustainable higher education. The study was carried out by emailing questionnaires to 76.616 academicians working in universities throughout Turkey and analyzing data collected from 497 samples. SPSS 24.0 and AMOS 24.0 software and quantitative analysis were used for statistical analysis of the data. We applied the Pearson test to determine the correlation between the points obtained from IC, OI and BOS scales and structural equation modeling in mediation analysis. The results obtained from the above-mentioned methods verify the full mediation impact of OI in the relationship between IC and BOS.
Keywords: Sustainability in higher education, leadership, intellectual capital, Blue Ocean Strategy, organizational innovation.

Introduction

As sustainability draws more and more attention in the overall process of development, it also becomes a focal point of academic research in higher education (Karatzoglou, 2013). The adaptation of sustainability in the field of education nowadays requires many different policies that should be put into practice. With regard to the aforementioned, as higher education is turning into one of the largest economic fields of our era, the leadership abilities of its employees are playing a more significant role (Djordjevic & Cotton, 2011). The lack of strong managerial support as well as skills and practices creates significant functional concerns (Freel, 2000; Spender & Kessler, 1995). IC is a critical mine of information for future innovations. The knowledge and skills of highly qualified employees provide opportunities for new markets and technologies to be seized and turned into innovative products and processes (Hsu & Sabherwal, 2012; Lee , Swink , & Pandejpong, 2011; Un & Asakawa, 2015), Applying this knowledge talented and skillful employees may improve the impact of university knowledge on innovations (Aboelmaged, 2014; Maietta, 2015). In this regard which methods and strategies would allow universities to accelerate their IC in the current field of sustainable higher education? Any leading and sustainable university should question the impact of IC as well as the fields where BOS could be applied. In this sense, our H1 hypothesis was created. As a result of the rapid development of technology and knowledge-based economies, academic institutions have recognized even more the significance of creating scientific knowledge and have turned into organizations that could cooperate with both academic and private industries. To obtain competitive advantage universities also cooperate with various universities throughout the world (Tseng , Huang, & Chen , 2018).

Concerning the aforementioned, blue oceans in higher education can be created as a result of changes in service and finance, management structure, education, teaching and earning areas (Aktan, 2009). This condition brings forward the need for leadership in every stage of the institution which predetermines a vision that acts as a bridge between its past and its future (Bennis & Nanus , 1985). In this sense, one should question the applicability of OI in BOS. Thus, our H2 hypothesis was created. In recent years researchers have examined the contribution of IC in the corporate success of knowledge-based advanced economies. IC and innovative policies could provide organizations with competitive superiority and sustainability (Chahal & Bakshi , 2015). The fact that value creation skills of institutions are related to knowledge creation and implementation skills provides them with a competitive market position (Martelo-Landroguez & Cepeda-Carrión, 2016). Universities, as knowledge-based institutions, promote the creation, development and dissemination of knowledge through their academic studies (publishing, patent, etc) and support the development of the country and the economy (Ahmed, Lodhi, Zaman, & Naseem, 2017; Fullwood & Rowley , 2017; Tan, 2016). The aforementioned shows the need for innovation ability in products and services that could provide a competitive advantage for the organization (Allocca &

Kessler, 2006). Therefore, universities should question the scope of impact OI has on the implementation of IC and BOS to obtain a competitive advantage**.** For this reason, our H3 hypothesis was created.

Findings obtained in this study show that OI has a direct impact on the IC and BOS. The research methods verify the full mediator impact that OI has on the IC and BOS relationship. For this reason, we felt the need to fill in a gap in the literature referring to the lack of studies dealing with the impact of OI on the IC and BOS relationship at the university level. If our study is successful it will convince universities to emphasize OI in the IC and BOS relationship as a means to obtain sustainability in the higher education industry. To reach this goal, we will continue by presenting research models and hypotheses as well as variables after which we will explain the process of measuring variable relationships. This will be followed by empirical analysis carried out by using the structural equation modeling (SEM) technique and finally the arguments and conclusions in the study will offer suggestions for any future studies.

Model and Hypotheses: Our suggestion for the analysis of the mediating role of the organizational innovation between the intellectual capital and blue ocean strategy is the model presented in Figure 1. Three hypotheses derive from this model.

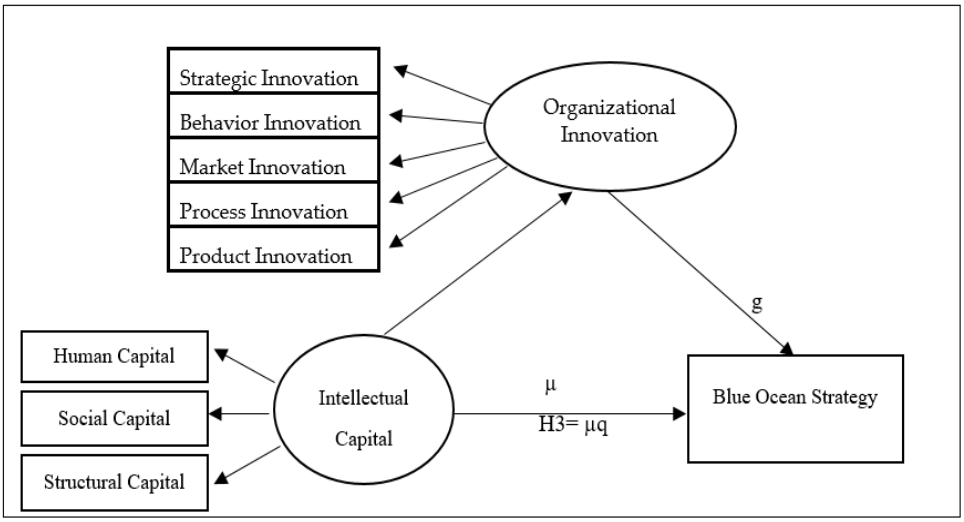


Figure 1. Research Model

Hypotheses: H1= μ, H2= g, H3= μq,

H1: There is a positive relationship between IC and BOS.

H2: There is a positive relationship between OI and BOS.

H3: OI has a mediating impact on IC and BOS relationship.

4. Methodology
2.1. Sample and data collection

We started our research in February 2019 by emailing questionnaires using Google Drive to 76.616 academicians (professors, associate professors, and assistant professors) employed in universities throughout Turkey (see Appendix 1). We collected the data in June 2019 and limited the number of samples to 497 persons. We used quantitative analysis to analyze the data. SPSS 24.0 and AMOS 24.0 software was used to analyze the data from the statistical point of view. According to the demographic characteristics of the academicians, we showed the average, standard deviation, the highest, and the lowest values regarding the points they scored on IC, OI, and BOS scales. We used Kolmogorov and Smirnov test, QQ plot, and kurtosis and skewness value to determine the state of compliance to the normal distribution of the points and it showed compliance to the normal distribution. In terms of data analysis, we applied the t-test and variable analysis (ANOVA) in comparisons with three or more category independent variables and Tukey test as a post-hoc test. Parson test was used to determine the correlation between the points obtained from IC, OI, and BOS scales, and SEM were used in the mediating analysis.

2.2. Variable measurement

IC scales. In the analysis, we used “IC scales” developed by Subramaniam & Youndt (2005) (Subramaniam & Youndt, 2005). IC scales are a quantitative tool comprising of three sub-factors such as Human Capital, Social Capital, and Structural Capital which measures 14 norm groups and is designed as a 7 point likert scale. Turkish validity and reliability study of the scales is performed by Özdemir &Taşcı (2017) (Özdemir & Taşcı, 2017). Cronbach Alpha coefficient of 0, 86 shows a high level of reliability.

Organizational innovativeness structure scale: In this study, we used the OI structure scale developed by Wang &Ahmed (2004) (Wang & Ahmed, 2004). Cronbach Alpha value of 0,909 seems to be appropriate to reliability standards. 5 factors are explaining the factor analysis of the OI structure. These factors are product innovation, process innovation, market innovation, behavioral Innovation, and strategic innovation. The scale contains 20 statements and a 7 point likert type evaluation.

Blue Ocean Strategy Scale: The questions used in the study were prepared according to the book Blue Ocean Strategy written by W. Kim and R. Mauborgne in 2005 (Kim & Mauborgne, 2005). For these statements, we used “Blue Ocean strategy Scale” which validity and reliability study was prepared by Öztürk (2015) and was used as a base for many studies (Öztürk, 2015). Cronbach’s Alpha value of 0,798 has been determined as suitable to the reliability standard. According to the implemented factor analysis results, the BOS scale consisted of 5 statements and a 7 point likert type evaluation.

2.3. Data Analysis

128 of the selected 497 participants were women while the remaining 369 were men (Table 2). 413 participants attended state universities while 84 attended foundation universities (Table 3). According to the duration of their tenure, 143 participants 1 – 5 years, 139 participants 6-10 years, 58 of them 11-15 years, and 157 participants` tenure lasted 16 years and more. To perform simultaneous testing of causal relationships among more than one variable found in the model and correct measurement errors which cause problems in behavioral analysis hypotheses were tested using SEM.

Table 2. Comparing the points obtained by academicians in terms of intellectual capital, organizational innovation and blue ocean strategy scales, according to their gender (n=497)

	Gender	**n**	$\bar{x}$	**s**	**t**	**p**
Intellectual Capital Scales	Women	128	4,30	1,20	1,457	0,146
	Men	369	4,12	1,16		
Organizational Innovation Scales	Women	128	3,80	1,14	1,658	0,098
	Men	369	3,60	1,17		
Blue Ocean Strategy	Women	128	3,55	1,13	0,519	0,604
	Men	369	3,48	1,16		

As a result of the t-test, when analyzing Table 2 and comparing the points participants obtained in terms of IC, OI and BOS scale according to their gender, statistically speaking, no significant difference has been determined (p>0,05).

Table 3. Comparing points obtained by academicians in terms of intellectual capital, organizational innovation and blue ocean strategy scales according to their university status (n=497)

	University status	**n**	$\bar{x}$	**s**	**t**	**p**
Intellectual Capital Scales	State University	413	3,99	1,13	-7,970	0,000**
	Foundation University	84	5,04	0,98		
Organizational Innovation Scales	State University	413	3,48	1,11	-7,426	0,000**
	Foundation University	84	4,47	1,06		
Blue Ocean Strategy	State University	413	3,35	1,10	-6,546	0,000**
	Foundation University	84	4,22	1,15		

*****p<0,01***

Table 3 contains the results of the t-test conducted to compare participants` points in terms of IC, OI and BOS scale according to the university status. When analyzing Table 3 and comparing the points participants obtained in terms of IC, OI and BOS scale according to their university status, statistically speaking, a significant difference has been determined (p<0,01). Points obtained by academicians working in state universities have been significantly lower than those working in foundation universities.

Table 4. Comparing points obtained by academicians in intellectual capital, organizational innovation and blue ocean strategy scales according to the duration of their tenure (n=497)

	Tenure	n	$\bar{x}$	s	Min	Max	F	p
Intellectual Capital Scales	1-5 years	143	4,25	1,24	1,40	7,00	0,422	0,737
	6-10 years	139	4,10	1,17	1,43	6,70		
	11-15 years	58	4,21	1,10	1,28	6,07		
	16 years and more	157	4,13	1,14	1,15	6,15		
Organizational Innovation Scales	1-5 years	143	3,75	1,19	1,00	6,85	1,829	0,141
	6-10 years	139	3,62	1,21	1,00	6,45		
	11-15 years	58	3,86	1,21	1,00	6,70		
	16 years and more	157	3,51	1,07	1,00	6,00		
Blue Ocean Strategy	1-5 years	143	3,47	1,13	1,00	7,00		
	6-10 years	139	3,49	1,27	1,00	7,00		
	11-15 years	58	3,76	1,23	1,00	6,80		
	16 years and more	157	3,44	1,02	1,00	6,00	1,206	0,307

p>0,05

Table 4 contains the results of the ANOVA variable analysis conducted to compare participants` points in terms of IC, OI, and BOS scale according to the duration of their tenure. According to the analyzed data and points obtained by the participants in IC, OI, and BOS scales, statistically speaking, there is no significant difference (p>0,05). Regardless of the duration of the tenure participants have obtained similar points in IC, OI, and BOS scales.

2.3.1. Measurement Model

When using Cronbach's alpha the standard indicator downloads should be equal to or higher than 0,70. All structures had acceptable values. The composite reliability indicator should be higher than 0,8 which is met by all structures (Nunnally, 1978).

Table 5. Correlation among the points obtained by academicians in terms of intellectual capital, organizational innovation and blue ocean strategy scales

		1	2	3	4	5	6	7	8	9	10	11
Human Capital	r	1										
Social Capital	r	**0,783***	1									
Structural Capital	r	**0,647***	**0,712***	1								
Intellectual Capital Scales	r	**0,899***	**0,927***	**0,874***	1							
Product Innovation	r	**0,480***	**0,459***	**0,543***	**0,549***	1						
Process innovation	r	**0,498***	**0,540***	**0,608***	**0,610***	**0,758***	1					
Market Innovation	r	**0,484***	**0,481***	**0,519***	**0,549***	**0,774***	**0,814***	1				
Behavioral Innovation	r	**0,485***	**0,554***	**0,597***	**0,607***	**0,692***	**0,794***	**0,728***	1			
Strategic innovation	r	**0,247***	**0,281***	**0,330***	**0,318***	**0,438***	**0,457***	**0,453***	**0,499***	1		
Organizational Innovation scales	r	**0,526***	**0,556***	**0,622***	**0,631***	**0,870***	**0,916***	**0,898***	**0,893***	**0,639***	1	
Blue Ocean Strategy	r	**0,368***	**0,382***	**0,416***	**0,432***	**0,527***	**0,565***	**0,608***	**0,531***	**0,449***	**0,632***	1

*p<0,01

Table 5 contains correlations among latent variables and descriptive statistics. All correlations among latent variables have a positive tendency and show medium and high power. The most powerful correlation is between IC and SC (0,927, p <0, 01) while the correlation between OI and PI (0,916, p<0, 01) is very close to it. From a statistical point of view, correlations among all variables are significant. The correlation between HC and SI draws attention as the weakest correlation (0,247, p<0, 01).

Table 5 contains the correlation among the points obtained by the participating academicians in terms of IC, OI, and BOS scales. According to the data obtained, the points generally obtained by participating academicians in terms of IC scales and all its sub-dimensions have a positive tendency and significant correlations have been determined from a statistical point of view (p<0, 01). Therefore, whenever participants scored higher in terms of IC scales, their score in terms of human capital and structural capital increased as well. Moreover, points academicians obtained in terms of IC scales, OI scales, and BOS scales show positive and from a statistical point of view significant correlations (p<0,01). In other words, whenever participants scored higher in terms of OI scales, their points in OI scales and BOS scales increased as well. Based upon this result, as we anticipate that the increase of the level of IC in universities will bring about an increase in the human, social and structural capitals, we could say that the same increase could be expected in OI and BOS levels as well.

According to the correlation results stated in the table, positive tendency and powerful correlation have been established between the general points participating academicians obtained in the OI scales and the points obtained in the product innovation, process innovation, market innovation, behavioral innovation, and strategic innovation sub-dimensions ($p<0{,}01$). Whenever participating academicians scored higher in terms of OI scales, their scores in terms of product innovation, process innovation, market innovation, behavioral innovation, and strategic innovation scales increased as well. Positive tendency and from statistical point of view, significant correlations have been determined between the points obtained in terms of OI scales and IC and BOS scales ($p<0{,}01$). Therefore, whenever participating academicians scored higher in terms of OI scales, their scores in terms of IC and BOS scales increased as well. Correlations between the points obtained by academicians included in this analysis in BOS scales have positive tendency and from a statistical point of view, they are quite significant ($p<0{,}05$).

2.3.2. Structural model

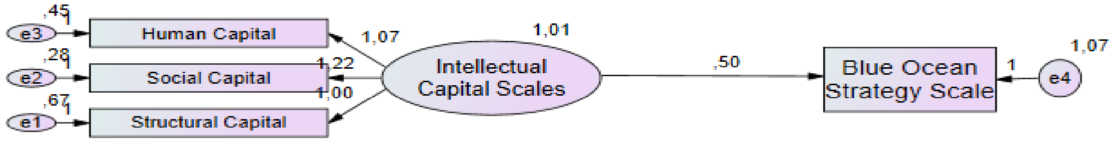
The Structural model has been tested using the AMOS program and Structural Equation Modeling. The Structural model analyzes the relationships among latent variables/structures and their impact on each other. From the conceptual point of view, the created model tends to analyze the relationships among the variables through an integrative point of view by analyzing the power and significance of the relationships within the model analyzing the mutual interaction among the variables (Meydan & Şeşen, 2011). The study uses Baron and Kenny`s criterion when analyzing the role of the mediating variable (Baron & Kenny , 1986). According to these criteria, the relationship between the predictor variable and the dependent variable should be significant. The relationship between the mediator variable and predictor variable should be significant. Whenever the mediator variable and dependent variable both enter a simultaneous regression analysis, the relationship between the two variables should be significant. Whenever the mediator variable and predictor variable both enter a simultaneous analysis, the previously significant relationship between the predictor and dependent variables should no longer be significant or their previous level of significance should decrease. Instead of two way arrows used in the measurement model one way arrows reflecting the causal relationship are used (Hair , Black, Babin , & Anderson, 2010). Figure 4 contains the structural model stated in our study. The structural model will first analyze the model`s compliance and test the hypotheses. It will evaluate the relationships between IC, OI, and BOS, examine the OI`s mediator role in IC and BOS relationship and analyze OI`s mediator impact on the relationship between IC, and BOS. The summary of the hypotheses that will be tested is as follows.

H1: There is a positive relationship between IC and BOS.

H2: There is a positive relationship between OI and BOS.

H3: OI has a mediating impact on IC and BOS relationship.

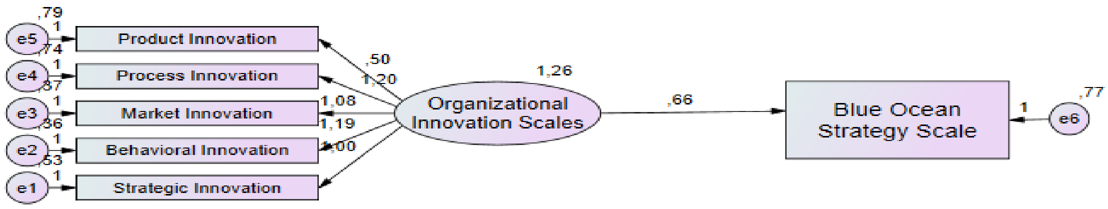
We examined the mediating role of the OI scale between IC and BOS scales and presented the findings below.



*(X^2/**sd**:5,669 **GFI**:0,989 **NFI**:0,988 **CFI**:0,990 **RMSEA**:0,097)*

Figure 2. Predictive situation of the Intellectual Capital Scales points in regards to Blue Ocean Strategy points

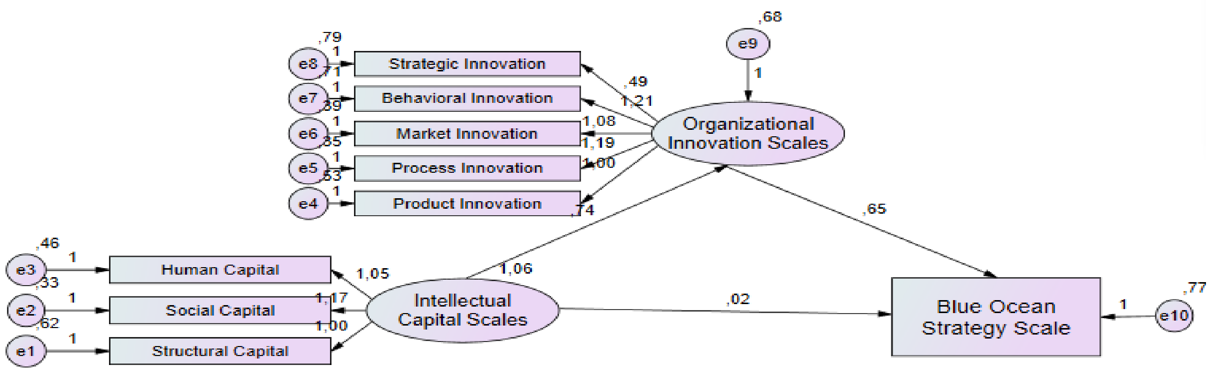
Analyzing Figure 2 we determined that in the predictive situation model the values of the goodness of fit indexes GFI, NFI, and CFI of the IC scales points alone in regards to BOS points show perfect fit and the values of X^2/sd and RMSEA are not within the acceptable limits. It is noticeable that IC scales points alone positively and from a statistical point of view significantly predict BOS points (β=0,50; p<0,05). Thereby, H1, which suggests that IC positively impacts the BOS studies, has been verified.



*(X^2/sd:5,669 **GFI**:0,989 **NFI**:0,988 **CFI**:0,990 **RMSEA**:0,097)*

Figure 3. Predictive situation of the Organizational Innovation Scales points in regards to Blue Ocean Strategy points

Examining goodness of fit indexes related to the predictive situation model in terms of OI scale points in regards to the BOS points shown in Figure 3, the values of X^2/sd and RMSEA are not within the limits of good fit while GFI, NFI, and CFI values are within the limits of a perfect fit. It is determined that OI scales points alone positively and from a statistical point of view significantly predict BOS points (β=0,66; p<0,05). Thereby, H2, which suggests that OI positively impacts the BOS studies, has been verified.



*(X^2/sd:3,454 **GFI**:0,970 **NFI**:0,977 **CFI**:0,984 **RMSEA**:0,070)*

Figure 4. Intellectual Capital and Organizational Innovation Scales points` simultaneous predictive situation of Blue Ocean Strategy points

The model presented in Figure 4 which examines the IC scales and OI scales simultaneous predictive situation of BOS scales points indicates that X2/sd and RMSEA values are within the limits of good fit while, GFI, NFI, and CFI values are within limits of a perfect fit. It is determined that while OI scales have a positive and significant predictive impact on BOS scales (β=0,65; p<0,05), IC scales points have no significant predictive impact on BOS scales points (β=0,02; p>0,05). In other words, it has been determined that OI scales is a real mediating between IC scales and BOS scales. Thus, we verified H3, which sets forth the mediating impact of OI, in IC, and BOS relationship.

5. Discussion and Results

This paper examines the mediating role of OI between IC and BOS in the sustainable higher education industry. It underlines the importance of leadership in the impact of IC structure on the BOS in universities. It also examines the impact of OI on BOS in the sustainable higher education industry. In this context, it evaluates hypotheses and presents the following results in regards to demographic data.

Tables 2 and 4 have shown that IC, OI and BOS points have not indicated any significant difference in regards to participants` gender or duration of their tenure. Nonetheless, according to Table 3, points obtained by academicians employed in State universities in terms of IC, OI and BOS were significantly lower compared to those employed in Foundation universities. Unlike state universities, which financial resources and organizational structure is met by the state government, the foundation universities are obliged to continuously strengthen intangible sources and abilities such as IC to ensure their sustainability and obtain their competitive advantage (Gallardo-Vázquez , Valdez-Juárez , & Lizcano-Álvarez , 2019, s. 3). The fact that foundation universities have external representatives in their management systems consolidates them economically and strengthens their ties to the society enabling them to obtain more resources and contribute to their social development (Eurydice, 2000). The board of trustees, which is widely used in the management systems of higher education institutions globally, has a very limited implementation in Turkey until now. The board of trustees system in Turkey is implemented merely in foundation universities and has not been implemented in state universities (Kurt , Gür , & Çelik, 2017). This situation shows that in terms of development, the implementation of OI is more extensive in foundation universities. Thus, we can state that foundation universities with their organizational innovation structure have been more successful in identifying opportunity gaps and implementing blue ocean strategies.

This study determines that in universities there is a positive and powerful relationship between IC and human capital with its latent variables as well as structural and social capital. IC, which is considered as one of the most important sources for universities to improve their competitive capacity, develop new strategies, and ensure their sustainability in the globalized world, is perceived as a driving force for innovations (Chen , Zhao , & Wang, 2015; Li & Yu, 2018; Xu & Sim, 2017). Universities should take note of human capital to increase their performance. Universities that have talented and experienced employees show a high value of social and structural capital. Many studies have confirmed that investing in human resources increases the performance of the enterprise (Hurwitz, Lines, Montgomery, & Schmidt , 2002). Structural capital in universities enables employees to use their existing knowledge innovatively and gain new technological skills (Hsu & Sabherwal, 2012; Subramaniam & Youndt, 2005). Allowing employees to implement new knowledge in innovative processes helps increases their motivation and share information (Sciarelli , Gheith, & Tani, 2020). The study shows that IC positively and from a statistical point of view significantly predicts BOS (β=0,50; p<0,05). Therefore, investing in IC will provide universities with an advantage in the field of innovation and the creation of value. Having adequate infrastructure and administrative support to provide university sustainability, gains special prominence in this process. One needs structural management to control the behavioral and innovative outputs and R&D inputs in the university-industry context (Thune & Gulbrandsen, 2011). To this end, the relationship between structural capital and BOS raises to the occasion. When organizing structural capital, in terms of sustainability, it is important to create eco-friendly and natural living quarters and campuses (Sobhani, Shahbuddin, Amran, & Rahman, 2010). The solution for the intense competition and decreased motion and progress universities face is to adopt and implement a blue ocean strategy (Selskab, 2017). Thus, every university differentiates itself and develops its strengths (Nomura & Abe, 2010). This study establishes that there are positive and powerful correlations between OI and product innovation with its latent variables, process innovation, market innovation, behavioral innovation, and strategic innovation. Consequently, when universities study organizational innovation they should approach it holistically and include all its sub-disciplines (Sethi, Smith, & Park, 2001; Wang & Ahmed, 2004). The study indicates that universities show a powerful correlation between organizational innovation and product innovation. Therefore, it is possible to turn R&D studies, which include the commercial activities of the universities, into innovative products and processes, improve marketing activities (Alegre & Chiva, 2008) by using new programs and new products and seize new market and technological opportunities by using the knowledge and skills of qualified employees (Lee , Swink , & Pandejpong, 2011).

Structural innovation, as OI`s latent variable, gains prominence with its strongest predictive ability. In terms of OI, internal transactions and processes of universities should demonstrate a dynamic structure and include reengineering (Otero-Neira, Lindman , & Fernández, 2009). The study discovered that the cooperation between universities and R&D had a positive impact on product and process innovation (Un, Cuervo-Cazurra, & Asakawa, 2010; Un & Asakawa, 2015). Besides their inventions, license fees, copyright sharing, publications, and consultancy agreements in the field of market and product innovations, universities can also contribute and make a difference in the field of economics by transferring technology to private companies (Agrawal, 2005). Thus, in terms of structural and technological innovativeness, they will ensure their sustainability in higher education.

This study states that OI has a positive and from a statistical point of view significant predictive impact on blue ocean strategy (β=0,66; p<0,05). Therefore, studies and investments made in the field of OI take up an important place in creating BOS. The blue ocean strategy in higher education can be created as a result of changes in the fields of service and finance, administrative structure and education, teaching, and learning (Aktan, 2009). This makes way to a sustainable strategy in universities. Consequently, working models based on BOS theories between all the stakeholders in the university-state and industry spiral creates an additional force that has a positive impact on the status quo in the higher education industry (Bragança, 2016). The mediating of sponsor companies has allowed the universities to improve and strengthen their cooperation within the industry and create strategic advantages in the field of technology (Chen , Wu, & Wu, 2013). In conclusion, we need to define eliminate, reduce, develop, and innovative factors (Selskab, 2017, s. 34). Creating OI and value innovation enables universities to create a sustainable strategy in the field of uncontested market.

The Structural Equation Model (SEM) used in this study determines that OI has a full mediating role between IC and BOS. In other words, we could say that in a situation where OI is included as a mediator variable in the relationship between IC and BOS, the impact of IC upon BOS becomes insignificant and the impact of OI on BOS increases. The fact that OI comes up in the relationship between IC and BOS puts forth the power of OI to explain BOS. If we put it differently, in universities BOS is shaped by IC and as a result, the relationship between IC and BOS is created in the context of OI. In conclusion, we could state that IC has a very prominent place in the creation of BOS in universities. However, it seems that organizational innovation takes on a locomotive role in the implementation of the blue ocean strategy.

6. Suggestions For Future Studies

Besides this study`s impact on literature, it will also shed light and set some boundaries on future researches of this kind. First of all this study has been conducted on university academicians with certain titles (professors, associate professors, and assistant professors). If the study includes all academic personnel and even the students, it will produce different results. Secondly, the comparison between the state and foundation universities could be done based on different demographic data. Thirdly, taking into consideration that this study is based solely on higher education institutions in Turkey, it would be interesting to compare the results with countries with different managements and structures. Finally, this study is focused on the mediator role of OI in the relationship between IC and BOS in universities in Turkey. Future studies could include knowledge management, organizational performance, and other strategies.

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Examining the Wellness Perception of Sports High School Students Trained in Football Branch[1]

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Abstract
The aim is to determine the wellness perceptions of high school students who study in football. The perception of wellness determined; mother education, father education status, income level, football league type, position played, licensed working time, such as changing according to the variables to examine. After the research permits were obtained, the students of the Sports High School who study in the football branch were informed about the research. A perceived wellness Scale was applied to 170 students who wished to participate voluntarily. T test and variance analysis were used because the data showed normal distribution. As a result, significant differences were found in the sub dimensions of physical, psychological and emotional wellness according to maternal education, psychological wellness according to paternal education level, and physical wellness sub dimensions according to the position they played.
Keywords: Sport education, perception of wellness, high school, football branch, student

Introduction

Health is defined by the World Health Organization as a state of complete well-being from a physical, mental, social and mental standpoint. In this definition, one of the most important concepts to focus on is the "state of well being" (Compton, 2005; Edlin & Golanty, 2012). Psychological well-being, which is a part of full well-being, involves individuals being peaceful and happy. Happiness has been reported to occur along with the history of thought and is one of the greatest wishes of each individual (Ryff & Singer, 2006). Wellness, or well-being is actually the expression of well-being in English, and its Turkish counterpart is "esenlik" (Karagözoğlu, 2005; Özen, Doğan & Konar, 2016). It has been suggested that while health is a state of complete well-being from a social, cultural, behavioural point of view, wellness is a state that spans time and continues (Balcıoğlu & Kaygın, 2018). In addition, wellness is described as physical fitness, regular exercise for Positive Appearance, delightful of life, personal development, using material and spiritual resources in social, psychological dimensions, taking responsibility for life (Myers, Sweneney & Witmer, 2000; Bourke & Galdens, 2007). The perception of wellness; the perception of physical wellness consisting of positive perceptions and expectations about health; the perception of psychological wellness involving the perception that events and conditions encountered in life will result positively for the individual himself. The perception of emotional wellness, which includes confidence in self-identity and self-respect. The perception of social wellness, which consists of the idea that the necessary support can be received from the family and the environment at the moment of need. It is also explained that there are six sub-dimensions, namely the perception of spiritual wellness, which consists of a state of awareness about the meaning and purpose of life (Memnun, 2006). In literature, it is observed that regular exercise and sports are recommended for wellness, that is, to be emotionally good, to achieve happiness (Brien & Katzmarzyk, 2006; Maher et al., 2014; Müftüoğlu, 2005; Penedo & Dahn, 2005). Sport is an important factor that positively affects the emotional state of individuals (Penedo & Dahn 2005; Yıldız & Ekici, 2017). Besides the contribution of sport to health, it offers role models and attracts attention to children and young people due to its constant media coverage. The football branch, which is especially considered in the media, has also become a thriving industry. Therefore, it is important to get better results, achieve better performance and achieve the highest level of efficiency in football competitions every day (Helgerud et al., 2001; Madan, 2019). High school period, professional identity development, career-related decisions begin to be made. It has been mentioned that young people have laid the foundations of their future professions with the choice of high school in Turkey (Cengiz, Titrek & Akgün, 2007. One of the vocational high schools selected for high school education is Sports High School. As a health-related vocational high school type, football High School students who choose the football branch that is considered in the media and who take responsibility for their life by choosing a specific branch have been wondering what level of wellness perception is. In this respect, what is the level of wellness perception of football High School students? Based on the main question, answers to the following problems were sought.

What is the perception of wellness of Sports High School students in football?

Does the perception of wellness of the Sports High School students who study in the football branch differ in terms of Mother education, father Education Level, family income status, the type of league played in the undergraduate year and the position they play?

Method

This study is a descriptive survey study. In line with the aim of the research, 210 students of Istanbul TFF Celal-Meral Aras Sports High School were informed about the research, which was opened in cooperation with the Turkish Football Federation and the Ministry of National Education, which formed the research universe, after obtaining the necessary permits in the academic year 2016-2017. The perceived wellness Scale was applied to 170 male students who participated in the study by the information survey, which determined demographic characteristics.

Data Collection Tools

Information Survey: In the study, a question form was created and applied to determine the economic situation, parents ' level of Education, license periods, the type of league they played and the positions they played, which is thought to have an effect on the perception of wellness of football students in the light of the literature.

Perceived wellness scale; Improved by Adams, Benzer, Steinhardt (1997). The validity of reliability for Turkey was made by Memnun (2006). Scale has got; physical well-being (4-10-16-22-28-34), psychological well-being (1-7-13-19-25-31), emotional well-being (2-8-14-20-26-32), social well-being (3-9-15-21-27-33), intellectual well-being (6-12-18-24-30-36) and spiritual well-being (5-11-17-23-2935) six sub-dimensions. The answers given are a likert-type scale of 6, ranging from the completely agree (6) option to the never disagree (1) option. The alpha value was found to be 0.82 (Memnun, 2006). Scale reliability for this research. It was found to be 074.

Analysis Of The Data

Since the data was analyzed in the SPSS 21.00 package program, the variance analysis was used because it showed normal distribution and the questions asked in the information survey were more than two ways. Tukey testing was also used from post hoc tests to find the source of the difference between groups. Significance level was taken as 0.05.

Findings

In Table 1, students studying in the football branch are given percentages of their socio-demographic characteristics. Gender was not questioned as all of the participants were male. The group with the highest maternal education level was 33.5% who graduated from secondary school, followed by 31.2% who were literate and 30% who graduated from primary school. The paternal education level was highest with 40.6% having graduated from secondary school, followed by 31.2% having graduated from primary school, and 18.8% having been literate. When the monthly income was examined, it was observed that those with a maximum income of 1501-2000tl at a rate of 32.9% followed by those with income between 2001-3000tl at a rate of 28.8%.

Table 1. Percentage distributions of socio demographics

Variables		n	%
Maternal education	Literate	53	31.2
	Elementary school graduate	51	30.0
	Secondary School graduate	57	33.5
	High school graduate	7	4.1
	University graduate	2	1.2
Father Education	Literate	32	18.8
	Elementary school graduate	53	31.2
	Secondary school graduate	69	40.6
	High school graduate	12	7.1
	University graduate	4	2.4
Income Status	1500tl and below	36	21.2
	1501-2000tl	56	32.9
	2001-3000tl	49	28.8
	3001 and above	29	17.1

Table 2 Examined; 7.1% of students played in Super League, 18.2% 2. League, 14.7% of 3. They played in the amateur league at a rate of 60%. Examination of the license year; 58.8% of the vast majority of 4-6 years were licensed. Of the majority, 48.2% were midfielders.

Table 2. Percentage distributions related to sports situations

Variables		n	%
League type	Super League	12	7.1
	2. League	31	18.2
	3. League	25	14.7
	Amateur	102	60.0
License duration	1-3 year	43	25.3
	4-6 year	100	58.8
	7 year and more	27	15.9
Playing position	Goolkeeper	7	4.1
	Defensive	61	35.9
	Midfielder	82	48.2
	Striker	20	11.8

In Table 3, physical (p=0.037), psychological (p=0.041) and emotional wellness perceptions (p=0.01) of high school graduates were significantly lower than those of literate and elementary school graduates. The scores of those whose father graduated from high school were significantly lower than those whose father graduated from secondary school and who were literate (p=.043).

Table 3. Sub dimensions of wellness perception relative to socio-demographic variables variance analysis (Anova) results

Variables	Perceived Wellness Scale sub-dimensions					
	Physical Wellness	Psychological wellness	Emotional wellness	Social wellness	Intellectual wellness	Spiritual wellness
	Mean ±sd	**Mean ±sd**	**Mean ±sd**	**Mean ±sd**	**Mean ±sd**	**Mean ±sd**
	Maternal education					
Literate	3.85±.69	3.95±.75	3.52 ±.73	4.22±.68	3.78±.64	3.81±.67
Elementary school graduate	3.86±.75	4.03 ±.71	3.93±.79	4.39 ± .78	3.67±.64	3.80±.59
Secondary School graduate	3.94± .57	3.88±.69	3.42±.53	4.25±.65	3.58±.66	3.62±.66
High School graduate	3.07± 1.03	3.14± .45	3.14±.40	4.12±.15	3.02±.71	3.16±.77
University graduate	4.2 ± .82	3.75±.35	3.58 ±.12	4.42±.35	3.75±.59	4.0±2.35
P	**0.037**	**0.041**	**0.001**	.712	.139	.075
	Father education					
Literate	3.99±.64	4.06±.77	3.73±.77	4.25±.60	3.69±.62	3.84±.53
Elementary school graduate	3.79±.60	3.92±.73	3.69±.70	4.32±.64	3.58±.56	3.63±.62
Secondary School graduate	3.92±.81	3.96±.68	3.53±.73	4.29±.85	3.71±.80	3.79 ±.73
High School graduate	3.47±.55	3.33±.63	3.25±.44	4.11±.64	3.22±.39	3.33±.64
University graduate	3.79 ±.72	3.71±.34	3.50±.49	4.29±.25	3.50±.56	3.79± .28
P	.207	**.043**	.237	.922	.201	.123
	Income Status					
1500tl and below	3.76±.72	3.97±.64	3.66 ±.72	4.22±.59	3.57±.66	3.71±.52
1501-2000tl	3.81±.63	3.88±.59	3.45±.53	4.23±.63	3.60±.66	3.71±.59
2001-3000tl	3.90±.85	3.88±.80	3.71±.85	4.22±.87	3.74±.82	3.84±.75
3001 and above	3.99±.51	3.98±.92	3.71±.73	4.57±.69	3.54±.41	3.53±.74
P	.533	.885	.221	.132	.536	.268

In Table 4, the results of the variance analysis of the lower dimensions of the wellness scale according to the participants ' sports status were examined; there were no significant differences in the lower dimensions in terms of the type of league played and the duration of the licensed study. When the lower dimensions of the wellness perception scale were analyzed in terms of the position played, only the scores of goalkeepers in the lower dimension of physical well-being were found to be significantly lower than those who played in the other position ($p=0.031$, $p<0.05$).

Table 4. Variance Analysis (Anova) Results Of Wellness Perception Subscale Scores According To Sports Status

Sub dimensions of the wellness perception scale

Variables	Physical Wellness	Psychological wellness	Emotional wellness	Social wellness	Intellectual wellness	Spiritual wellness
	Mean ±sd	**Mean ±sd**	**Mean ±sd**	**Mean ±sd**	**Mean ±sd**	**Mean ±sd**
The type of league they play in						
Super League	3.96±.89	3.90±.75	3.62±.71	4.44±.71	3.55±.89	3.90±.65
2. League	3.83±.85	3.97±.71	3.63±.69	4.05±.69	3.67±.91	3.64±.59
3. League	3.72±.64	3.85±.58	3.56±.58	4.25±.60	3.42±.54	3.67±.54
Amateur	3.89±.65	3.92±.76	3.59±.75	4.34±.73	3.67±.59	3.73±.70
P	.709	.951	.985	.216	.392	.673
Licensed working year						
1-3 year	3.95±.58	3.99±.75	3.63 ±.74	4.27±.55	3.63±.60	3.71± .63
4-6 year	3.77±.67	3.86±.71	3.59±.66	4.25±.72	3.58±.64	3.71± .63
7 year and more	4.00±.93	3.98±.71	3.55±.85	4.42±.91	3.79±.87	3.75 ± .81
P	.186	.569	.894	.550	.328	.973
Plauing position						
Goolkeeper	3.14±.80	3.14±.36	3.74 ±.38	4.17±.42	3.62±.82	3.88±.27
Defensive	3.92±.61	3.99±.78	3.58±.74	4.33±.73	3.69±.67	3.68±.68
Midfielder	3.90±.72	3.87±.72	3.56±.70	4.29±.75	3.57±.69	3.71±.66
Striker	3.72±.77	3.94±.64	3.75±.77	4.14±.64	3.65±.64	3.82±.71
P	**.031**	.566	.692	.740	.779	.777

Results, Conclusions and Recommendations

In Table 3, the results of the analysis of variance in the perception of wellness according to socio-demographic variables are given. There was no significant difference in social wellness perception, intellectual wellness perception and spiritual wellness perception subscales according to maternal education level. However, the physical wellness perception, psychological wellness perception, and emotional wellness perception subscale scores of those whose mothers graduated from high school were significantly lower than those whose mothers were literate and primary school graduates. When we look at the literature, there are no publications that question the perception of wellness according to the maternal education level. Studies have been conducted to evaluate the quality of life of individuals with perceived wellness, and cognitive life satisfaction, as well as to experience good feelings (Coatsworth et al., 2006). If the findings of the research are to be interpreted, it has been evaluated that with the decrease in maternal education level, expectations about physical health have dropped, and physical wellness perception scores may have increased due to small efforts towards physical health being considered important. As a result of the increasing expectations of those who graduated from Mother's education high school, it was thought that the scores taken from the lower dimension of physical wellness may have fallen as a result of the insufficient efforts made towards physical health. Also those with low levels of education of the mother; along with his win high school football, popular as a result of the training in a discipline, therefore their perception of the conditions of life for themselves and students ' perceptions of psychological wellness that may increase that resulted positive, thus the confidence and self-esteem is defined as a combination of was considered to be supported by an increase in perceptions of emotional wellness. However, detailed studies need to be planned for more precise results.

There were no significant differences in the lower dimensions of physical wellness perception, emotional wellness perception, social wellness perception, intellectual wellness perception and spiritual wellness perception according to the paternal educational level of football High School students. In the lower dimension of psychological wellness perception, significantly lower scores were taken against those whose father graduated from high school. It can be said that the perception of psychological wellness, which is the perception that living conditions have turned positive in their favor, has improved by settling into a high school in football, which is the popular branch of those with low paternal education, as in maternal education. When we look at the literature, there was no difference in the perception of wellness according to the participants ' own level of Education (Madan, 2019). In this study, the parents ' education was questioned as all of the students attended high school level education. According to the family income of the students, there was no significant difference in any lower dimension of the perception of wellness scale. The results of the perceived wellness scale of the students studying in the football branch did not differ significantly compared to the undergraduate year. Similar to the results of this study, the level of wellness, the duration of the license, the year of study, and the level of the license possessed did not differ significantly in the studies conducted on adolescents and football coaches (Deniz, 2017; Madan, 2019).

The research findings showed that significantly higher scores were scored compared to the position played by students, especially those who played with goalkeepers in midfield and defender positions. The high level of physical wellness perception scores of defenders and the fact that they think they need to be physically strong at the point of Defence suggest that it may be due to the Association of defence with strength in general. However, it was concluded that detailed studies needed to be planned for more precise results. Studies in the literature have also found significant differences in the position played by footballers (Deniz, 2017), as well as studies that found no significant differences in any aspect of the perception of wellness according to the level of Duty (Memnun, 2006).

In this study, there was no significant difference between the type of league the students played in. In some studies contrary to research findings in terms of league type, especially 2.League and 3.It shows that the emotional and physical wellness perceptions of those who play in teams that are struggling in the league are higher than those who play in teams that are struggling in the Super League (Deniz, 2017).
In the literature, it was observed that there were studies that investigated the relationship between health perception, intensity of exercise, fatigue and performance, before and after training (Gallo et al., 2016; Gastin, Meyer & Dean, 2013).

As a result, the perception of physical, psychological and emotional wellness scores of Sports High School students whose mothers graduated from high school were significantly lower than those whose mothers were literate, elementary and middle school graduates. In addition, the psychological wellness scores of the students whose fathers graduated from high school were significantly lower than those of the students whose fathers were literate, elementary and middle school graduates. Detailed studies on the subject were planned and it was considered important to investigate the reasons for the differentiation of parents ' education level in the perception of wellness.

Plagiarism Rate =%10

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Well-being and Health during COVID-19 Pandemic

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Abstract
The fast spreading of the COVID-19 virus led WHO to consider it as a pandemic. All over the world the entire population of different nations was lockdown. From the Psychological and Psychopedagogical Counseling Service (SAP) at the University of Cádiz, a health promotion program called "Well-being and Health" was designed and implemented. Participants belonged to two different groups considered as "at risk" in the context of health alert: students from the Elderly University Program of University of Cádiz and women with a breast cancer diagnosis. The program aimed to promote the well-being of participants during lockdown due to the pandemic; and to evaluate the effectiveness of an online health promotion program based in relaxation and meditation techniques, the principles of positive psychology and the promotion of a healthy lifestyle. It is possible to conclude that participating in an on line group health promotion program, with an emphasis on a healthy lifestyle, training in relaxation and meditation techniques, and based in the positive Psychology perspective, protected people from the impact of stress associated with lockdown.
Keywords: Online education, lockdown, well-being, online treatment, COVID-19

Introduction

Due to the worldwide spread of the new disease generated by COVID-19, on March 11, 2020 the World Health Organization (2020) declared the SARS-CoV-2 / COVID-19 outbreak as a pandemic. Disasters such as earthquakes, terrorist attacks, plane crashes, among others, have in common their potential becoming a trigger for a "disaster shock or trauma", due to "the emotional stress that adults as well as children may experience after a disaster" (Gerrard et al, 2020: 10).

Ensuring a healthy lifestyle and promoting well-being for all at all ages is the third Sustainable Development Goal (SDG) proposed by the United Nations (UN, 2015). Health psychology is concerned with people's well-being and from the perspective of the health promotion, the need to give a comprehensive response to health problems and highlight the health potential of individuals and communities is emphasized.

In Spain, on March 14, 2020, the state of alarm was declared (Royal Decree 463, 2020) and the social, preventive and compulsory lockdown of the entire population was ordered. This measure was maintained for 99 days. As a community and massive emergency, the pandemic impacts everybody's lives. However, such impact could be higher if person belongs to a risk group, considered as such the elderly or those who have a diagnosis of a chronic pathology. It would increases the chances that they develop some type of behavioral or emotional imbalance (Gerrard et al, 2020; Urzúa, Vera-Villarroel, Caqueo-Urízar & Polanco-Carrasco, 2020).

Isolation implied the separation of relatives and affections, a restriction on the usual sources of individual and social reinforcement, a disruption in the normal course of daily life, so stress, fear, sadness, and uncertainty may settle in some people. Anxiety increases psychological discomfort (low mood, irritability and sadness) and decreases positive emotions (joy, hope) affecting people´s well-being (General Council of Psychology of Spain, 2020a).

Due to the growing boom of the internet and new information and communication technologies (ICT), the Official College of Psychology of Madrid, in collaboration with the Center for Applied Psychology of the Autonomous University of Madrid, published the Guide for Intervention in Tele-psychology (De la Torre Martí & Pardo Cebrián, 2018), to regulate the offer of psychological services through ICT. Some on line interventions are self-guided web programs, videoconferences, therapy, follow-up, counseling and evaluation or screening tasks.

The European Federation of Psychologist's Association (EFPA) established that, during lockdown, consultations, especially through video chat, are a viable alternative for offering psychological therapy. It recommended the need to agree with the client the web tool they will be using to have the meeting, to have a private space to protect the privacy during it, and not to use public computer (Consejo General de la Psicología de España, 2020b).

In Spain, as a result of the state of alarm, all educational institutions nationwide were forced to close their doors and, therefore, immediately put an end to face-to-face classes. This implied the need of a huge and rapid reorganization process to guarantee the continuity of the classes in an on line basis. On April 10 it was decided not to return to face-to-face classes at the universities until next September 2020 (Royal Decree 487, 2020). The state of alarm was maintained until June 21, 2020 (Royal Decree 555, 2020) completing a total of 99 days of it in the country.

The health alert situation brought the urgency to design intervention programs promoting people's health in an on line format during lockdown, and, even though its quality of on line, facilitate the establishment of close interpersonal relationships, so necessary and protective in that particular situation. Universities around the world began to use the on line format to offer different psychological o pedagogical services for students. It was necessary to implement this kind of intervention to promote social interaction and learning experiences preserving the care of everyone's health. From the Psychological and Psychopedagogical Attention Service of the University of Cádiz (SAP), a specific course was designed to groups considered at risk: students of the Elderly University Program of University of Cádiz. Due to circumstances derived from research agreements between institutions, the proposal was extended to members of an association of women with a diagnosis of breast cancer. Both groups were offered the online intervention program called "Well-being and Health", which was designed considering topics of interest to these groups and the unprecedented situation.

Mental health prevention and promotion interventions enhance the development of individual, social and environmental conditions to improve the person's quality of life and they "are effective and have brought benefits for health and also for society" (Jané-Llopis, 2004:67).

Barlow et al, (2019) consider that people use emotional regulation strategies that, as a paradox, contribute to the maintenance or deterioration of the symptoms that they intend to eradicate: "everyone can benefit from learning healthy ways to respond to their emotions" (p .25). The authors suggest the acquisition of new and healthier ways of coping with emotions when they interfere with one´s well-being, and they emphasize the active role of the person in restoring its own health and well-being.

Several contributions were considered for the design of the online intervention program to promote health and well-being called "Well-being and health" during lockdown. First of all, some principles of the

Unified Protocol for the Transdiagnostic treatment of Emotional Disorders (Barlow et al, 2019) were considered. This Protocol aims to improve the emotional regulation of the participants, to increase their positive emotions and well-being, and emphasized the role of the person in restoring its own well-being.

Also the Live with Vitality Program (Fernández-Ballesteros, Caprara & García, 2004) was taken into account. It addresses certain domains in which the elderly person can experience greater control over actions that can contribute to his well-being and a better personal adjustment (Caprara, Fernández - Ballesteros & Alessandri, 2016). Gutiérrez, Tomás & Calatayud (2018) consider that certain aspects related to health and life satisfaction are directly related to better aging.

Due to the pandemic, the psychological guideline against isolation and principles for mental health care during emergency scenarios provided by the World Health Organization (WHO, 2012), the American Psychological Association (APA, 2020) and the Inter-Agency Standing Committee (IASC, 2020), the reference group on psychosocial support at WHO, were also considered.

Facing a pandemic could imply a multitude of physical and mental health problems, so "an individual can take care of his health as much as possible to prevent a fall out later onwards. Yoga intervention can be a crucial remedial factor that aids the individual to become physically as well as mentally capable of functioning" (Giri et al, 2020:886).

The general objectives were to promote the well-being of elderly people who make up the educational community of the University of Cádiz or who form an Association of women with a diagnosis of breast cancer, during confinement and to evaluate the effectiveness of an online health promotion program.

Program overview

Since April 2020, the "Wellbeing and Health" Program was developed. It consists in eight on line group sessions, held weekly that last two hours. The theme of each meeting are: 1st) Psychological orientations against isolation, 2nd) Healthy lifestyle, 3rd) Positive Psychology, 4th) Cognitive flexibility, 5th) Sleep hygiene, 6th) Cognitive training, 7th) Active aging and 8th) Sharing my own experience during lockdown. Different task were assigned in between sessions such as self-recording of emotions or regular relaxation practice.

The program emphasized the regular practice or the relaxation techniques that have verified to be effective in managing anxiety (Weekly, Walker, Beck, Akers & Weaver, 2018). Relaxation as well as meditation practice in yoga are positively associated with mental health (Birdee et al, 2017), that is why yoga practices can be considered as a mind-body practice which produces positive effects on health as well as on the quality of life. Research suggests that providing yoga practices "[…] may be an effective way to help students develop self-regulation, mind-body awareness and physical fitness, which may, in turn, foster […] positive student outcomes such as improved behaviors, mental state, health and performance" (Butzer et al, 2020, p.3). Yoga practices should produce positive effects on health, behavior and emotions (Butzer et al., 2016; Guerra & Rovetto, 2020).

Positive psychology is focused in promotion of positive subjective experiences, positive individual traits and positive institutions, in few words, it is interested in everything that improves the quality of life and prevents the appearance of pathologies. It highlights the characteristics that make life worth living, such as hope, creativity, courage, responsibility and optimism (Seligman & Csikszentmihalyi, 2000). The PERMA´s model by Seligman (IEPP, 2020) was also considered. This author emphasized the importance of the enhancing of positive emotions, interpersonal relationships, a sense of meaning and personal accomplishment for the person´s own well-being.

Some principles of the positive psychology were taken into account, such as the consideration of the capacity of positive emotions to contribute to enhance people to be more creative, socially integrated and healthy (Fredrickson, 2002). Baños et al. (2017) proved that the ICT can be used to promote and train positive emotions, to improve the quality of the personal experience and to increase the person´s well-being. A group based program was designed, as there is enough evidence that has proven its effectiveness to increase the experience of positive emotions (De Ornelas Nardi & Cardoso, 2015; Coto-Lesmes, Fernández-Rodríguez & González-Fernández, 2020). The sense of humor is considered as a useful tool to mitigate stress and to strengthen the person´s immune system (Lefcourt, 2002), that is why recreational activities were included for the group of participants in each session.

The program was also nourished by the contributions of Walsh (2011) related to its proposal of the eight therapeutic lifestyles changes (TLC) which promote the acquisition of healthy lifestyle habits such as physical exercise, adequate nutrition, relaxation, close interpersonal relationships, recreation and pleasant activities, to name some of them, due to the highly positive effects of the TLC on people's physical and mental health.

Conclusions

The main objective of this paper was to share the characteristics of a specific program for the promotion of health and well-being designed and developed during lockdown due to the COVID-19 pandemic. Participants reported an increasing in subjective well-being and positive emotions as well as a decreasing in discomfort.

Due to the fact that the proposal was completely online and developed during lockdown, results are suggestive in regards to the implementation of an online health promotion program: "Psychological treatments delivered through the Internet represent an emerging model to improve access to evidence-based Cognitive Behavioral Therapies" (Sandín et al, 2020, p. 197).

From the Positive Psychology perspective for the treatment of mental health problems, it is considered that psychiatric as well as psychological practices should promote positive psychosocial factors that have proved to enhance the improvement of people's well-being from a cognitive behavioral framework (Rosen, Gilld & Salvador-Carulla, 2020). Optimism, expectations of self-efficacy and social commitment should be promoted (Jeste & Palmer, 2015).

The program promoted mental health because "not only work, but also contribute to a greater mental well-being and increasing the quality of life at the individual and community level" (Jané-Llopis, 2004, p. 74).

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Re-creating the Museum Space: Museum Distance Learning after Covid-19

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Abstract
We live in an age when schools go beyond their existing buildings and use informal learning places and possibilities. Museums are often used by schools and some even have shared programs. Nevertheless, museums are lifelong learning spaces and since 1990's, after "new museology" spread around the world, they were exploring different ways to connect their users. During Covid-19 Pandemic lockdown, most of the museums opened their collections online and people had a chance to see the museums and their collections, no matter their geographic location. Some museums organized online workshops and explored different ways in sharing their museum learning possibilities. Museums that were prepared for this alternative environment could offer more, but pandemic lockdown was the time which this alternative way, was the only way for the museum experience.
Museums offer multisensory experience for learning. When learning becomes distance, it evolves into distance museum learning, trying to stimulate senses through a screen. This study explores the creative ways on how to use the screens to experience architecture of real life and virtual museums and examines the challenges and possibilities in online museum learning. Creative use of the web space is explored and shortlist for "Family Friendly Museum Award from Home" by "Kids in Museum" is examined. In the conclusion it offers some key findings to enhance museum distance learning.
Keywords: Covid-19, museum learning, digital museum, siber space, virtual museum

Introduction

Year 2020 started with news about a virus which cause serious health conditions and deaths in China and announced officially as a pandemic in March 11, 2020 (WHO, 2020). The current Covid-19 crisis has been a time when people had to stay home in social isolation. The term social isolation describes a situation of keeping physical distance from others. People couldn't contact in the out real World and used virtual environment to work, learn and socialize. People coulnd't go to cafes, restaurants, schools or offices but by getting online they could visit virtual museums. By the use of virtual museums they could experience another space anywhere in the World by staying in their houses real environement. People could either visit places they've already been to or explore real places they wonder. Museums tried to respond the need of another space when one can't have.

During this health crisis, museums have used their therapeutic effect to people who isolated themselves not to get infected and protect others. Museums can create a restorative environment (Kaplan et al, 1992) and the theurapetic effect was used in 2018 with a partnership between the Francophone Association of Doctors in Canada (MFdC) and the Montreal Museum of Fine Arts (MMFA). Doctors prescribed free visits to the museum to the patients and their companies (Medical Express News, 2018). Museums offer a powerful tools to contact the real world such as representations and informations on real objects and art.

Virtual Museums and Their Respond to Self-Isolation

Common response of the museums to the pandemic lock down was the attempt to connect their visitors virtually through www and social media and offer more than just an onlines site visit.
The context of todays virtual museums is often referred to French politician and writer André Malraux's *musée imaginaire* ('museum without walls' or 'imaginary museum') which was published as a book in 1951 in French and 1967 in English (Allan, 2020). As a one big World Wide Museum, Google Arts & Culture) offer 3,468

virtual museum tours which the user can explore and personalize, create their own museum with the pictures of artworks from anywhere in the World (https://artsandculture.google.com/. Virtual museums can be representations of the real museum building or imaginary. Harrison's vision for future museums with social subjects in the center and that museums doesn't have to be in a building (Harrison, 2005) seems to be already virtually realised. There have been previous projects for standardisation of appropriate museum metadata for digital World such as Athena Plus(https://www.athenaplus.eu/), Linked Heritage (https://linkedheritage.eu/) and museums knew how to go digital.

The fact that museums are available to much wider audience than these that can physically go to the galleries led non-traditional audiences able to engage with work that they would otherwise never have come across. Since museum experience is expected to be pleasurable, Pekarik et al. (2010) identified four most satisfying user experiences:

- Object experiences
- Cognitive experiences
- Introspective experiences
- Social experiences

During Covid-19 crisis museums tried to respond these experiences virtually. NEMO (Network of European Museum Organizations) provides an overview of how museums in Europe respond, when 90% of museums were physically closed, during Covid-19 crisis (NEMO News, 2020):

- Digital Initiatives
- YouTube channels
- Providing objects for creative
- Documenting the pandemic
- Donating necessary materials to hospitals

There have been some initiatives for children and e-learning like Prado Museum's children's audio guides on Youtube (https://www.youtube.com/playlist?list=PL8S8EUbs69xK5gr2N12d8qnHpcNZQTTQ6) and Getty Museum Challenge to recreate artworks at home had huge impact on social media. (Barnes, 2020)

Space as an Interface in Virtual Museums

Dercon (2015) states, digital platforms are not only new environments to exhibit collections but can be used as plus terminals of the museums. Virtual environment is user generated and Frisch's definition of shared authority (1990) in museums, which is different from collaboration and participation could be tested virtually. Plus terminals can be understood as a virtual space that doesn't intent to replicate the real environment but has its own characteristics.

Rozwadowski states www's inability to convey "scale, texture, a sense of place, and other three-dimensional qualities" and the ability for freedom of movement (Rozwadowski, 1996). Finn (1998) says "Be it small or large, seeing the real thing is unambiguous. There is often an emotional reaction that accompanies the perception of true size". Galleries and their digital extensions are often seen as overly editorial, full of texts, images and information and certain navigation paths with little left to the user's chioce (Kahn, 2020).

Interactive interfaces and gamification is often used to avoid information overload and make the visit a multsensory experience. "The Museum of the World" project launched in February 2020 is an interactive experience through time, continents and cultures, featuring objects from British Museum and Google Cultural Institute. Using Web GL (Web Graphics Library) jumping back in time to explore objects and listen to British Museum Curators insightsis possible (https://britishmuseum.withgoogle.com/).

Virtual games and gamification, as a powerful tool for learning, offer more than an exhibition of an archive. Interestingly, for most of the museums, museum games was out of the game during this Covid-19 crisis period. One of the possible reasons of this was that, this is an emergent field in technology and is not widely used. Another reason is the way of thinking about the gamificaiton in museums. Digital museum games, which involve museum space in their web interface, digitally replicated the real museum building too, as a way of connecting objects and artworks in one structure.

Museum games like “Capture the Museum App” are often designed for a hybrid experience when the body of the visitor is in the real building (http://www.capturethemuseum.com/). But in virtual space movement types define if it is a realistic experience. It’s not easy and fun to move with Google Streetview in Google Arts. Because in real life people walk and the buildings replicated in virtual environment are made for walking. In virtual environment one need to jump, zoom or rotate not walk. It is hard to find the right angle to see the artwork without distortion. But gaming tecnologies can give the feeling of a realistic navigation and make it more like an embodied experience. Creative use of the interfaces.

McDonald refers to McConnell who states in virtual World “users remain in control and are not limited or intimidated by traditional expert barriers such as cataloguing systems or curatorial taxonomies” (McDonald, 2005).

Moldoveanu et al. (2008) state the importance of a mini map which doesn’t only help to replicate the movement in real life, also includes useful properties. “The mini-map facilitates both the user’s orientation and its fast movement in the virtual space: The current position of the user is indicated on the map by a specific symbol. The map is divided in disjunctive sensitive areas, provided with tool tips. The map contains teleportation points – with a click on such a point, the user is teleported in the corresponding position.” Artistic way Met Museum’s interactive mini-map design is a graphic design artwork which doesn’t show the real building layout but gives references to the real building. Designed for children use, it is a mini-map as a spatial interface (Met Museum, 2020).

Social experience is important as navigation to connect the museum. Tate London’s visitor research shows that 45% of people use the museum to spend time with others and socialize (Dercon, 2015). 3D virtual museum space can be used for socialization too, where voice or text chat channels is possible and user can create friends lists and groups of interests with a message board (Moldoveanu et al., 2008). Personalization as creating a profile with self interests of the museum collection and sharing them is a tool for socialization too. Moldoveanu et al. (2008), describe how users can personalize the museum by creating their own galleries and tours. “Web sites can offer ways to use tools to help their users to configure basic virtual museum environement and user can populate this space with their own imported objects or cloned objects from the museum, then share and create a tour. These ideas can be used for educative purpose or fun”. When users design the museum space and curate their own exhibition and experience become an artistic work and online visitors becomes users and artist.

Inside the Virtual Museum Space: What Does it Contain?

“Kids in Museums” is working with museums in the UK, to make them more welcoming for children, young people and families. Every year a museum is selected as “Family Friendly Museum of the Year”. Since Covid-19 lockdown in 2020 it has changed to “Family Friendly Museum Award From Home” (Kids in Museum, 2020).

The shortlist of 26 museums selected from 400 nominees from all around the World are announced. There are five categories:

- Best Film
- Best Social Media Activity
- Best Website Activity
- Going the Extra Mile
- Best International Digital Activity

National Museums Liverpool's "My Home is My Museum" Project is one of the nominees for "Best Social Media Activity". The project uses this crisis time as a chance to learn more about their visitors. They invited children between 4-11 ages to create their own exhibition; telling about who they are by using objects from their houses or creating artwork and make their own gallery. Children named the exhibition, designed a poster and created a promotional video for social media (National Museums Liverpool, 2020). With a similar attempt to change the direction of the communication with their users, this time for adults, Arter's learning team in Istanbul had "Tell from Home" project which 10 users meet on Zoom to talk about a selected object in their houses (Arter, 2020).

"Best Social Activity" nominee Museum of Wales, created a competition for 6-11 called "Minecraft Your Museum". Children made their researches of objects in the museums, selected their collection and built their own museum on Minecraft. The prize of the competition is a VIP trip for the winner and his whole class to one of their museums (Museum of Wales, 2020).

The Withworth at the University of Manchester, nominated for "Going the Extra Mile Award", used the therapeutic effect of museums by their "Still Parents" group. In partnership with Sands, Stillbirth & Neonatal Death charity, the Whitworth launched a series of free art workshops for parents who lost their babies (The Withworth, 2020).

Rijksmuseum is nominated for "Best International Digital Activity" category. Rijks combined the virtual tour and gaming on their website by the "Key Challenge" for 9 years old and up. One key is hidden inside the artworks in each section of the building and 10 keys are hidden in total. Each key opens a letter in a puzzle. By providing an interactive map, users can jump from one section to another in Great Hall, Gallery of Honor and Nightwatch Gallery (Rijksmuseum, 2020).

In the same category Museum of Singapore, "Small Big Dreamers At Home" project offers an online interactive exploration with the national art collection. "Watch and Listen", "Artist's Studio", "Play and Discover" and "Make and Create" sections of their website combines interactive games and Do-It-Yourself activities with information on their art collection in a user friendly way, inclusive for all ages (Museum of Singapore, 2020).

Findings and Discussion

Covid-19 lock-down period has been a time of self isolation. Physical isolation enhanced the use of siber space and accelerated the speed on the way to Society 5.0 (Salgues, 2018), which describes the integration of virtual and real environments to define "super intelligent society".

High-pitched use of virtual environment during self-isolation created a space crisis which was a time to re-think the need of a space and museum spaces. People could connect artworks and museum activities online. This leads to a new discussion on how to connect the museum space through artworks when it is a virtual 3d space, eather a representations of the real World museum building or an imaginary 3D virtual building.

Gaming is a powerful tool to experience space virtually. Gaming technology can use both of the environements and has the potential to make users navigate as in real World. In virtual reality the need to use hand or head mounted display devices to closest experience to real. Study in 2019 shows there are not very significant differences in navigation between real and virtual environment if a head mounted device is used (Marin-Morales et al., 2019). Otherwise, navigating and finding the right angle to see the artwork needs efford. Because people don't walk but jump from one point to another, rotate, zoom or sometimes loose scale if scroll. Siber museums need to pre-define experiences. This is quite different from creating one's own embodied experience in the real physical building.

Differences of imaginary and replica 3D Space studied in this article can be listed as follows:

A- Museum Building as a 3D Virtual Replica:
1. Offer re-experience, remembering what has been learnt during the visit
2. Re-thinking with enjoyment of space experienced during real visit is possible
3. Can be used to create expectations for the next visit
4. Hard to navigate virtually.

B- 3D Virtual Imaginary Museum Space: The Plus Terminal
1. User oriented space, which can also be designed by the user.
2. Users can think about space and object relations
3. Offers different ways of perceiving artworks and personalization

This paper discusses how Covid-19 crisis changed the use of virtual museums and in order to understand and explore further opportunities, explored other ways that involve spatial experience than just digital archives becoming virtual exhibitions. Other than spatialization, several powerful tools for learning in vitrual environment museums are found:

- Personalization: The way to create the meaning of space (or the space itself) and artworks
- Connection: Sharing experiences of all contributors like visitors, museum staff and artists.
- Social Experience: Sharing self interests with others, chat channels, friends lists
- Object Experience: Object inspired user artworks and AR/VR object experiences
- Navigation: The use of mini maps or interactive creative maps
- Therapeutic Effect: Productive art threapy and online social gatherings
- Gaming: Structuring the spatial experience
- Shared Authority: User controlled learning environments
- Inclusivity: Easy to use environments for all ages not just children

During Covid-19 isolation times children connected the museums online personally, not with their schools. Schools were closed and teaching continued online. Schools and museums both look to improve their skills to go beyond their walls and improve learning tools. Their partnerships in real life, didn't find a reflection in siber space. The future of school-museum partnerships in virtual environment should be studied with the experiences gained for personal use of virtual museums during Covid-19 crisis.

Plagiarism rate= 2 %

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Do Parents Support Teachers?

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Abstract
The aim of this study is to determine the opinions of preschool, primary, secondary and high school teachers about parent support. The study group of the research conducted in the central district of Bolu in the 2019-2020 academic year consists of 100 teachers. In the research conducted with qualitative research method, the data were collected through a semi-structured interview form and analyzed by descriptive and content analysis. According to the research, parent support decreases gradually from preschool to high school. Parents mostly support teachers for academic achievement such as the supply of course materials, follow-up and repetition of assignments. Teachers expect support from parents in terms of getting to know the student, following his development, developing self-care skills and correcting negative behaviors. The support to be got makes a positive contribution to teachers, students and education. The main reasons for not getting enough support from parents are negative attitude, socio-cultural-economic situation, education level, and parents' working or being separated.
Keywords: Teacher, parent support, student, effects on teachers

Introduction

The fact that societies create the qualified workforce they need at school increases the importance of education at all grades and levels. Societies that recognize the importance of this process, on the other hand, are constantly interested in the variables related to education and training and are trying to develop them. Learning, which forms the basis of education, starts in the family and continues in a planned and programmed way at school (Gökçe, 2000). School, which has an important place in the life of the individual, is an important institution that informs the individual at every level starting from preschool institutions, forming their behaviors and preparing them for a higher education institution (Erdoğan & Demirkasımoğlu, 2010). Just as the student's school success depends on the harmony and interaction of the student, teacher and parents, these three important peers are equally responsible at all levels, from the quality of education to the creation of qualified individuals with the qualifications that the society desires.

The factors that ensure the student's success in school during the education process depends on the factors such as the interest of the student, his level of intelligence, his attitude towards school, the type of school he attends, the success of the school and the teacher , and parent-student-teacher relationship, school family solidarity, family harmony, family participation in school activities as well (Babaoğlan, Çelik & Nalbant, 2018; Çelenk, 2003). Teachers, who are the power that works for the child after his parents (Hatipoğlu & Kavas, 2016), cannot quite get to know the student without knowing the students' family. Parents establishing a close relationship with the school and the teacher, ensure awareness for the support of the teacher at home by sharing their children's home conditions with the teacher, as well as raising awareness for the teacher to give more qualitative support and supplementary contributions to the student's sucess (Acar, 1985; Çınkır & Nayır, 2017). Because, parents' attitudes and behaviors are important factors in the child's physical, mental, social and emotional development and school success (Yıldırım & Dönmez, 2008). In addition, this situation enables them to obtain more accurate information about the student and to get prepared for more suitable and tolerant educational environments.

The teacher who directly interacts with the students and closely follows their interests and needs plays a major role in the involvement of the parents during the education and training process (Gökçe, 2000). Parents who know best about the acquisitions, experiences and deficiencies of the child until they come to school and who can guide the teacher in this regard support the teacher by giving the necessary information, making the students do homework , repeating the things learned at school and providing the teaching materials (Ceylan & Akar, 2010). Parent support is as important for the morale and motivation of the teacher as the student success. Therefore, these two elements complete each other.

Parents and teachers, in other words, the fact that the home and school environment are the two most important environments in the development of the child has increased the interest in the investigation of the roles of the parents in education (Erdoğan & Demirkasımoğlu, 2010). The involvement of parents in the educational environment and whether they provide support to their children, teachers and school are among the most discussed topics. Teachers' organizing activities for students in crowded classrooms, trying to teach the curriculum, and not being able to equally take care of each student increases the importance of this support. In addition, the changing and becoming more student-centered education approach increases the importance of parent support and requires that they engage with the teachers more. Parents who come to school and interact with the teacher will support the teacher and they see the needs of the teacher and their child as well and will struggle more to make their child successful. With this study conducted in line with the stated reasons, whether or not parents support teachers, their support types and emerging problems are tackled and discussed. Accordingly, the aim of this study is to determine the opinions of the teachers working in preschool, primary school, secondary school and high schools in the central district of Bolu, regarding parents' support.

Method

In this research, a scientific pattern, which is one of the qualitative research methods, that investigates how people perceive and live the world, and what they have created in any subject according to their experiences, has been used (Merriam, 2018).

Working group

The working group is specified with criteria sampling, which is one of the purposeful sampling methods of the study. While the purposeful sampling method is used to explain the events and facts, the researcher evaluates the situations according to some criteria he prepared with criterion sampling (Yıldırım & Şimşek, 2013). In this regard, the teachers working in four different levels as preschool, primary school, secondary school and high school who want to answer questions and provide information about parent support are included in the study group. The study group is composed of 100 teachers, 25 teachers from each level, in the central district of Bolu in the 2019-2020 academic year. 72 of the teachers are women and 28 are men; 8 of them are between the age of 20-30, 60 of them between 31-40, 28 of them are between 41-50 and 4 of them are 51 and above. 78 of them have bachelors degree, 22 of them are postgraduates, 74 of them are graduates of education faculties, 26 of them are graduates of science and literature faculties.

Data collection tool

In the research, semi-structured interview form has been used as a data collection tool. For the interview form prepared with the detailed literature review, the opinions of the specialist instructors have been taken, a preschool, a primary school and a high school teacher have been in pilot practice and the study has been finalized. Following the permissions of the ethics committee and provincial national education, volunteer teachers have been reached. The following questions have been sought in the interview form:
1. Do you think you get support from parents?
2. On which issues do you get the most support from parents?
3. On which issues would you like to get support from parents?
4. How do you think the support you get from the parents will contribute to you?
5. If you cannot get support from parents, what could be the reasons?
6. What should teachers and school management do to increase parent support?

Data Analysis

The data were analyzed by content and descriptive analysis. The data collected in the descriptive analysis are summarized and interpreted according to the pre-determined themes, and frequently quoted from the opinions of the participants; In content analysis, concepts and connections that can explain the data are reached (Yıldırım & Şimşek, 2013). Accordingly, in the study, the data were coded, the coded data were determined in the themes, codes and themes were arranged, tables were created, and the findings were defined and interpreted. The analysis process started by coding the forms as PreS1 (preschool), PS1 (primary school), SC1 (secondary school) and HS1 (high school) and continued with analysis. Similar statements were grouped in the analysis, and the frequency of repetitions is shown in the tables. In order to support the codes, examples are given from the opinions of the participants.

Validity- Reliability

In terms of validity and reliability in the research, the activities from the preparation of the questions to the selection of the participants, the collection-analysis of the data are explained in detail in the related titles. In order to ensure adequate and appropriate participation in the data collection process, which is one of the basic strategies for ensuring internal validity and credibility (Merriam, 2018), 100 teachers were reached until similar answers were received in the opinions. For internal validity, the repetitions of the teachers' answers in the interview form were determined as codes and themes, they were tabled, and this process was applied to all questions. Repetition frequency of the concepts in the codes and themes are given and the opportunity to make more objective comments and comparisons is provided. The codes and themes are explained in the findings and their suitability was compared to the previous studies. The process has been explained in detail from the preparation of the data collection tool for external validity to the application-analysis phase. The findings were compared with the literature and the suitability of the meanings and the realities in practice were tried to be reached. In order to ensure reliability, some of the data is presented in the findings section with direct quoting method. Ethical coding was used to indicate who the assessment belongs to. Forms of interviews done with teachers are stored.

Findings

The level and form of support that teachers get from parents

Table 1. Teachers' Opinions About Whether They Get Support From Parents

	The frequency of support	n	Occasions when support is got	n
Preschool	Yes, always	15	Lessons (course tools and equipment supply, assignment following etc.)	11
	Mostly	6	Participation in in-school and out-of-school activities	7
	It changes each year	3	Special situation of the student	2
	No	1		
Primary school	Yes	12	Lessons (course tools and equipment supply, assignment following etc.)	8
	Sometimes	7	Participation in educational and social activities	5
	Not enough	5	Special situation of the student	4
	No	1		
Secondary school	Yes mostly	13	Lessons (course tools and equipment supply, assignment following etc.)	4
	Rarely	10	Participation in educational and social activities	2
	No	9	Special situation of the student	2
Highschool	Yes	5	Special situation of the student	7
	Seldom	7	Lessons (course tools and equipment supply, assignment following etc.)	6
	No	14	Special situation of the student	

According to Table 1, preschool teachers are the group that gets the most support from parents, and the support that teachers get from parents decreases from preschool to high school. While the number of teachers who say that they always and often get parent support is 21, the number of teachers stating that they don't get or rarely get in high school is 19. Although the high level of preschool is followed by primary and secondary schools, it is seen that the support is not sufficient at these levels as well. Teachers get support from parents at all levels in terms of participation in educational activities and social activities, and for the special situation of the student. In the type of support received, lessons come first. This situation is similar to the special situation of the student in high school.

As an example of the teachers' views about the findings obtained; *"As especially in the family participation activities, they support the activities that the class needs. When they support it at home in the solution of the* *problems experienced, the solution of the problem becomes easier (PreS2)"; "Although it is not with all parents, some parents give support by preparing classroom materials, taking part in activities and teaching their children at home (PS13)", "I work partly at the village school. In general, parents say that they are not able to take care of the children because of the reasons such as "I go to work, we feed animals, we look after babies (SC10)"; "We cannot get support from parents. There are parents that we cannot reach even when we call. Even if the meetings are held once or twice a year, there are few parents who misinform or lack information when we want to learn about the student (HS15)."* can be shown.

The kinds of support that teachers get most from parents

Table 2. Teachers' Views on Which Issues They Get the most Support From Parents

	Support related to the student	n	Support for the lessons	n	Support to the school	n
Pre-school	Solution to the problematic behaviours	5	Family involvement activity	13	Social activities such as charitiy bazaar	6
	Getting to know the student	2	Material supply	9	Trips, sightseeing, projects	5
	Making them adopt the rules	1	Following up homework	5	Financial support	1
	Healthy diet	1				
Primary school	Preparing the student for school	4	Course materials supply	7	Social activities such as charitiy bazaar	8
	Solution to the problematic behaviours	3	Following up homework	6		
	Keep up with school	2	Classroom activities	5		
Secondary school	Following student improvement	10	Following up homework	5	Social activities such as charitiy bazaar	7
	Overcoming problematic behaviour	3	Material supply	1	Sports activities	2
	School attendance	3				
Highschool	Absenteeism	5	Cooperation	1	Attending facilities	2
	Overcoming negative behaviour	4	Student behaviours	1		
			Course material supply	1		

In Table 2, it is seen that teachers get support from parents about students, lessons and school subjects. All grade teachers get support from the parents about the solution of problem behaviors. Support for getting to know the student before school continues in the form of preparing the student for school in primary school and following his development in secondary school. In addition, it is observed that the absenteeism from school becomes and the support of parents is provided starting from primary school. The common type of support stated at all levels regarding the support for the courses is the supply of course materials and the follow-up of homework. Due to the nature of the education provided, parents also contribute to family activities in the classroom in preschool and primary school. The teachers have stated attendance to the activities (charity bazaar, social and sports activities, etc.) as the support given to the school by parents. *"Social organizations, family participation activities, setting up rules for children, changing behavior (PreS3)", "Homework (while preparing for the exams), doing research work, providing necessary experimental materials in classes, social activities etc. (PS23)", "In various social activities organized by the school (PS6)", "About the dues in the class where I am a class consellor teacher, about homework follow-up (SC12)", "On the reasons for student failure or about harmful habits (HS2)", "I need help with reading books and make the students read at home. I request them to be careful about absenteeism and proper dressing (HS13)"* are the examples for teachers' views on the findings obtained.

The types of support that teachers want to get most from parents

Table 3. Teachers' Views on the Types of Support They Want Most from the Parents

	Pre-school	n	Primary school	n	Secondary school	n	Highschool	n
Student	Negative behaviour	7	Negative behaviour	7	Student success	5	Absenteeism	9
	Child development	4	Giving responsibility	7	Family manners	4	Negative behaviour	7
	Accurate information	2	Self care skills	4	Negative behaviour	4	Fight against negative behaviours	4
					Care for the student	4	Getting to know the student	6
							Limiting the use of technology and social media	3
							Dressing	2
Course	Activity attendance	4	Follow-up of homework	9	Follow-up of homework	2	Follw –up of studies	7
	Follow-up of homework	3	Reading habit	5	Reading habit	1	Follow-up of homework	6
	Material supply	2	Activity attendance	1	Course attendance	1	Academic success	4
							Course material supply	3
							Being prepared for the lesson	1
School	Activity attendance	5	Financial support	1	Activity attendance	4	Activity attendance	3
	Financial support	2	Activity attendance	1	Financial support	2	School visit	2
Parents	Communication	3	Being a role model	3	Cooperation	3	Problem solving	2
	Respect	2	Not reflecting family relationships	1	Being a role model	5	Teacher support	1

According to Table 3, teachers mostly want to get support from parents about students, lessons, schools and parents. As the grades go up, the expectation from the parents increases. All grade teachers expect support from the parents regarding negative behaviors. Negative behaviors include absenteeism, fighting harmful habits, technology / social media limitation and dressing. This finding shows that the expected support for the student at high school level is mostly about negative situations. Teachers also expect parent support about getting to know, showing interest, and giving responsibility to the student. Teachers' expectations of support regarding the lessons meet at a common point about tne follow-up of homework at all levels. Apart from this, the teachers have the expectation of parent participation in the activities and giving them the reading habit. As for the student, the group with the highest expectations about the lessons is the high school teachers. Regarding the school, all grade teachers have the expectation of parents' participation in the activities and financial support. Teachers also expect parents to be a role model for their children, to follow the rules of communication and respect, to support them in cooperation with the teacher. Examples of teachers' opinions on this subject are as follows:

"In collaboration with the teacher about the development of the child. For example, I expect the family of a child, who constantly shows violence against his friends and does not comply with the classroom rules, to help the teacher (PreS5)", "It is a pity that they leave the children on their own. It is nonesense if the parents tell the children to study while they themselves have the telephone in their hands. To be a good role model. There is a problem about reading books. It would be better if parents were interested in reading (PS1)", "Caring for the student and communication with the teacher. Being a good role model (SC1)", "I would like financial support in order to improve the sports facilities and materials of the school (SC13)", "The most basic support we can get from parents is their visiting the school periodically. Thus, we can get to know our students better and learn their problems at home (HS1)", "For the student's homework and responsibility awareness, general moral rules, drug addiction, and for the measures to be taken to increase academic success (HS6).

Contribution of parent support according to teachers

Table 4. Teachers' Views on the Contribution of Parent Support

	Student	n	Teacher	n	Education and Training	n
Pre-school	Increasing motivation	8	Being happy and motivated	6	Quality and efficient education	6
	Positive contribution to development	6	Increasing communication	4	Giving the behaviour easily	2
	Developing a positive attitude	6	Facilitation of problem solving	4	Fun activities	1
Primary School	Positive contribution to development	6	Being happy and motivated	3	Quality and efficient education	5
	Motivation, increasing success	6	Lightening the workload	2	Positive classroom climate	2
	Correcting negative behaviour	3	Facilitation of problem solving	2	Facilitating activities	1
Secondary school	Motivation- contribution to success	15	Being happy and motivated	7	Quality and efficient education	4
	Positive contribution to development	8	Lightening the workload	6	Positive classroom atmosphere	2
Highschool	Motivation, increasing success	13	Getting to know the student and problems	6	Quality and efficient education	5
	Reducing negative behaviour	7	Increasing motivation	2	Improving the school climate	3
	Positive contribution to development	3			Quality and efficient education	

According to Table 4, the contribution of parent support to the teacher are the titles of students, teachers and education. Teachers at all levels have stated that parents' support increases student motivation and success, contributes to their development, decreases negative behaviors and improves them. Parent support also contributes to the teacher and enables teachers to be happy and motivated and to solve their problems more easily. Parent support in terms of education, as a common view at all levels, provides quality and efficient education, and improves school and classroom climate. Exemplary opinions of the teachers on this subject are *"My student and I are happy (PreS2)", "The negative situations in the behavior of children will disappear and the quality of education given to the children who are prepared will increase (PS13), "It is motivating in business life (SC22)", "There is much more sharing and interaction with everyone's participation. This makes my job easier (SC3)", "Cooperating with the parent and working in coordination will decrease the chance of the student to avoid responsibility. Student's supervision at home and at school will increase his success (HS6)", "Parental support enables me to know my student more. It contributes to the guidance, I can reveal their talents (HS15).*

Reasons for teachers' not getting support from parents

Table 5. Teachers' Opinions About The Reasons For Not Getting Support From Parents

	Pre-school	n	Primary school	n	Secondary school	n	High school	n
Negative Behaviour	Miscommunication	5	Wrong attitude	9	Indifference	9	Indifference	8
	Prejudice	3	Indifference	5	Miscommunication	5	Wrong attitude	7
	Comparison	3	Miscommunication	3	Disregard	5	Miscommunication	5
	Disregard	3	Unconsciousness	2	Unconsciousness	3	Unconsciousness	5
	Not accepting the behaviour	2	Not accepting the behaviour	1	Negative attitude	1		
	Regarding as a babysitter	2	Reading habit	1				
	"I know" attitude	2						
Special case	Working parents	7	Education level	7	Working parents	7	Divorced parents	4
	Divorced parents	1	Working parents	3	Economic condition	5	Home-school distance	4
	Education level	1	Socio cultural level	3	Education level	4	Working parents	3
	Economic condition	1	Family problems	1	Socio-cultural level	4		
			Age gap	1	Divorced parents	4		
					Home-school distance	4		

(Not responding: pre-school: 10, primary school: 5 teachers)

According to Table 5, teachers ' not being able to get parent support is due to parents' negative behaviors and special cases. The common view of all the teachers about the parents regarding the negative behavior of the parents is miscommunication, indifference, disregard and negative / wrong attitude. In addition, as a common opinion, pre-school and primary school teachers have stated that parents don't accept their children's behaviours, and secondary and high school teachers have stated unconsciousness. Regarding the special cases of the parents, it is understood that all the primary teachers see parents' working or being separated/divorced as an obstacle to parent support. In addition, the education, socio-economic and cultural level of the parent is also an obstacle to parent support. As examples to teacher opinions; *"Working parents may have workload, they can't empathize, they have difficulties in accepting the negative aspects of their children (PreS5)", "They do not want to come, they work, they can't get permission (PS16)", "Some of the parents work in shifts and have time problems. Some of them are not able to guide their children academically. Some of them do not have sufficient experience in taking proper care (SC3)", "Parents' socio-cultural structure, being employed, not having a positive attitude towards school (SC23)", "The fact that some of our students are boarding can make it difficult to communicate with families (HS8)".*

What teachers and school management should do to increase parent support

Table 6. What the Teacher and the Management Should Do to Increase Parent Support

	What the teacher should do	n	What the school management should do	n
Preschool	Effective communication	21	Organizing educational-social activities and meetings	16
	Self improvement	7	Establishing effective communication with the teacher and the parents	8
	Organizing family involved events	5	Announcing the activities and decisions taken to the parents	6
			Being interested in the wills and suggestions of the teacher	5
Primary School	Effective communication	16	Organizing educations and meetings	14
	Informing	6	Informing the parents	5
	Family visit and education	7	Supporting the teacher	5
	Parent meetings	4	Establishing effective communication	5
			Not seeing as a source of income	2
Secondary School	Parent visit and discussion	15	Organizing educational-social activities and meetings	20
	Communication and cooperation	11	Establishing effective communicaton	6
	Organizing social activities	6	Involving parents in management decisions	6
	Taking care of students	4	Parent visit	5
			Supporting the teacher	4
High-school	Effective communication	14	Organizing activities in and out of school	12
	Organizing activities in and out of school	11	Parent meeting and visit	10
	Home visit and education	9	Communication	7
	Informative meetings	4	Supporting the teacher	4

In Table 6, it is seen that all the teachers are united in the view of effective communication about the duities of the teacher. Apart from this, teachers have stated that the family should be informed, visited and educated by organizing activities. As the duty of the school administration, the teachers have mostly shown that educational and social activities and meetings must be organized. In addition, teachers think that the school management should communicate effectively with them and with the parents, support the teacher and announce the decisions to the parents. Secondary and high school teachers also suggested that school administrators visit the family. Teachers' views on this issue are as follows: *"Teachers can inform and guide the parents correctly. On the other hand, the school management can send a brochure, a message containing information about the things done at school, and hold meetings. Parents can be informed about the contributions and results of the activities in collaboration with teachers (PreS17)", "Parents should be educated. Teachers should cooperate with the parents and parents should be visited. School management should inform the parents frequently, and authorities should be consullted for help to remediate low-educated parents (PS8)", "The number of interviews can be increased, the school management can support teachers and hold frequent meetings with parents (SC20)", "In order to get parent support, teachers must be in constant communication with parents and give parents a sense* *of trust. School management should reach the parents one by one and meet more frequently at school. The general condition of the school should be reported to the parents face to face each month (HS6)".*

Results and Recommendations

The research shows that the support that teachers receive from parents gradually decreases from preschool to high school. It is thought that pre-school's not being obligatory ensures willing parents' to send their children to school, and elementary school's being the basis of education life of the student is effective in increasing parents' support at these levels. Preschool is the first school environment where the family and child first encounter. For the first time that the child leaves his family and is entrusted to others is the main reason why the parents are in a lot of contact with the school. Primary school is the stage in which compulsory education begins in our country. It is the first step to school for some children and their parents. This causes parents to be in more contact with the teacher and the school so that their children can be with them in their first experiences and start and continue their education life. Secondary and high school are the periods when the classes are branched, different teachers are encountered, and the students enter the adolescence process. This period is a period when the student shows himself as an individual and tries to gain identity, the interest shifts to other variables, especially to friends, and the communication with the parents gradually decreases. As all these reasons cause the family and the child to fall apart, their reflections are also seen in school life. In addition, the family now thinks the child as grown up and he can take care of himself.

Parents support teachers especially in academic success such as preschool, primary and secondary school supplies, follow-up of homework and revision at home. This situation can be considered as an indicator that families care more about academic success than other types of success. The main reason is the exams applied at the entrance of the high school and university in Turkey which highlight academic achievement more. In addition, the fact that parents support the issues of limiting the use of telephone and social media, the prevention of harmful habits, and the correction of negative behaviors which are the biggest problems of today's high schools, shows that they are aware of the danger.

Parents support teachers mostly about the problem solving and supporting the right behavior at home in preschool education, and preparing the student for school life in primary school. This shows that what is learned at school is reinforced at home. In secondary school, the main factors that decrease the support of parents are the appearance of adolescence problems in the students, branching in the classes and the fact that the parents are counteracting with more than one teacher. In high school, similarly, parents try to support teachers about behavioral disorders caused by the adolescence problems of the students and absenteesim from the class. During this period, students' being stuck between the university entrance exam and social life, youth, excuses arising from the affairs and disinterest of the parents, less coming to the school decrease their support levels. The fact that the education system requires academic success makes parents to try to support teachers about the lessons. Because, from preschool to high school, parents contribute to the teacher, from the supply of course materials to the follow up of homework at home. It should not be forgotten that the contribution given is one of the most important factors affecting students' school success (Arslanargun, 2007). The support of parents to social, sports and cultural activities organized at school at all levels are important activities that bring teachers, students and parents together. These activities develop the student, make the parent proud of his child, and strengthen the teacher-parent communication. As a matter of fact, a good school-family-student cooperation is essential for student success and an effective communication should be provided between them (Çalışkan & Ayık, 2915).

Teachers want support from parents on many issues. However, the research shows that most parents are aware that they should support the teacher, but they do not support them adequately. At all levels, teachers are waiting for support from parents in terms of getting to know the students, following their development, developing their self-care skills, showing interest and correcting their negative behavior. Teachers' expectation of support about lessons is to get help with homework, to participate in classroom activities, to provide materials and give reading habits, to participate in school-oriented activities and financial support. In addition, teachers expect parents to be role models to their children and to communicate with respect. In fact, all kinds of support from the parent to the teacher is important. As a matter of fact, the children who have supportive families have higher school success (Çelenk, 2003). Erdoğan and Demirkasımoğlu (2010) also state that families should participate in the education process, but the sensitivity required is not shown in practice.

Parent support contributes positively to teacher, student, education and self-education. It increases the morale and motivation of the student, the positive attitude towards the school improves, which brings academic success. While the process increases the morale and motivation of the teacher, it also contributes to the school climate and the quality of education. Researches also show that there is a positive relationship between parents 'positive and informative approaches and teacher performance (Hatipoğlu & Kavas, 2016), that parents' support brings teachers 'commitment to work and their self-devotion (Oymak, 2015) and students' development as a whole (Acar, 1985).

According to the research, the reasons why teachers do not get enough support from parents are the parents' negative attitude towards school and teacher, their socio-cultural-economic status, education levels, ignorance, indifference, etc. In addition, the obligatory fact that parents have to work, is also one of the biggest obstacles. The fact that the parents work not only prevent them from taking care of their children sufficiently but also hinders their communication with the teacher. Babaoğlan, Çelik and Nalbant (2018) also stated similar obstacles in their research. However, an effective school-family cooperation is a must for the students to increase their school success and prepare for life better. For this, teachers should communicate effectively with parents, and school management should organize informative meetings and seminars. Researches also emphasized that school administrators and teachers be constantly in interaction and cooperation with parents, and especially school-family cooperation to be improved, parents to be informed about the activities at school, and parents' meetings to be planned regularly (Gökçe, 2000; Yıldırım & Dönmez, 2008; Ceylan & Akar, 2010; Çınkır & Nayır, 2017).

In line with the results of the research, the following suggestions have been developed: In all school levels, teachers can organize classroom activities, directive and informative meetings to keep communication with parents and ensure socialization. School administrator can hold informational meetings, educational seminars, social, sporting and cultural events that can involve parents in the decisions taken. Provincal directors and the ministry of national education can increase awareness with public spot like educational films, cartoon films or slogans. In addition, the reason why parents’ support is less in high schools can be investigated in a detailed study.

Plagiarism Rate = 8%

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Ukrainian Universities under the Pressure of Pandemic: The Effects of Pandemic on Teacher Leadership, Self-education and Life-long Learning

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Abstract
The paper aims to reveal the effects of the pandemic on Ukrainian education. Ukrainian universities faced more challenges during the pandemic than educational establishments in other European countries. The authors will expose the reasons leading to a bigger physical and emotional stress for Ukrainian students and faculty. Student and faculty feedback and experience from several Ukrainian universities during the spring semester of 2020 are used as a resource to research on COVID-19's impact on teacher leadership and self-education in Ukrainian universities. The COVID-19 pandemic increased the significance of teacher life-long learning. The impacts of the pandemic are studied in parallel with the revision of web-based instruction, online-platforms, and online curricula development, faculty, and personnel web-literacy in Ukraine. Teacher leadership, self-education, and life-long learning are considered to have been crucial in pandemic time to accomplish the spring semester responsibilities and are viewed twice as decisive to be efficient in a post-pandemic time to prepare themselves and students for the probable future challenges in the world
Keywords: Pandemic, teacher leadership, self-education, long-life education, online instruction.

1. Introduction

The COVID 19 pandemic has forced unprecedented changes so that some people say life will never get back on track. Education is no exception and, although the imposed quarantine had lasted only 3,5 months before the spring semester finished, it seemed to be an entirely new life.

Before the pandemic Ukrainian higher education had been steadily achieving the obvious accomplishments in student preparation. The achievements were attributed to the fact that Ukraine had been striving for integration into the European educational system since the day of its independence, which had required a thorough reconsideration of the principles of academic, organizational, pedagogical, and ethical aspects. The changes in the political orientations urged teachers to gain new competencies and skills, adopt new assessment strategies, integrate a student-centered approach, address the issues of academic integrity, develop more flexible university governance models, broaden the horizons through the internationalization of education - all these attested to the significant advancement in maturing democratic tendencies in education (Powell, Kuzmina, Yamchynska, Shestopaliuk, Kuzmin, 2015). The university teacher competencies were defined as pivotal, updating knowledge and obtaining new professional skills – as mandatory, because they make the basis for student expertise laying a foundation for productive citizenship (Blaskova, Blasko, Kucharcikova, 2014; Vladescu, 2016).

The pandemic of 2020 has challenged the world so much that there is hardly a country unaffected (Barnett, Doucet, Owens, 2020; Li, April 24, 2020). However, what has made the Ukrainian pandemic crisis unprecedented is the fact that regardless of the progressive changes in the educational sphere, web-literacy and online teaching skills were not addressed to the full extent due to poor financing, and the pressures of social and political character (Kahkonen, 2018; Sakalo, 2020; Kunichak, 2020). The domain of distance learning with all pertaining features, e.g., the university platforms, well-developed infrastructure, identification of faculty and students, transfer of part of teacher offline load to online, offering degree-seeking students to choose between offline and online classes, training professors in web-literacy did not rise to priority, and web-instruction wasn't considered a viable alternative to traditional F2F teaching at the classical state universities. To counteract the tradition there were some initiatives taken by the faculty members who, using the service of freelancers, pioneered in creating voluntary learning online classes as an asset to the face-to-face academic environment in some universities (Powell, Kuzmina, Kuzmin, Yamchynska, Shestopalyuk, 2014; Mykhailenko, Blayone, van Oostveen, 2016). In 2014 a non-governmental organization Prometheus developed a mass online course system (Makarenko, 2017). Prometheus offered free online lectures serving to spread the knowledge about and comprehension of distance learning at a larger scale. However, being a non-profit organization, it did not relate to state university academic curricula, assessment standards, and state certification.

Taking into account the statistics according to which 53% of Ukrainians were below the average level of digital literacy, 15% did not have such skills at all, 37.9% had low skills, the government and the Ministry of Education and Science of Ukraine became concerned with the level of digital literacy of Ukraine's population. The Digital Literacy Platform "Diia: Digital Education" was in development and planned to be launched on January 21, 2020, aiming to train digital skills in 6 mln Ukrainians in 3 years (Honcharuk, 2020). Intending to enhance and modernize Ukrainian education the New Ukrainian School Reform was initiated in 2016 and was scheduled to be executed in three phases, reaching its full implementation in 2029. The last phase of the New Ukrainian School Reform within the years of 2023-2029 targeted to provide equal access to qualitative education and to create a contemporary educational environment for all students that would be hardly operable without web-literacy, effective technology application initiating the new formats of instruction (New Ukrainians School Reform, 2016).

Needless to say, the first response from Ukrainian teachers to the demand to transfer to web-based instruction overnight was bewilderment, frustration and, obviously, on March 12, 2020, the beginning of the quarantine in Ukraine, students and faculty had a vague idea how to act under the new circumstances in order not to disrupt the semester. There weren't auditoriums to gather students to deliver the content material, to exert control and student evaluation. According to Yegor Stadny, Deputy to Minister of Education and Science of Ukraine, only about 20 universities (out of 652) in Ukraine were ready to respond to the pandemic crisis (Sakalo, May 16, 2020). They had used the LMS before the quarantine and had managed to adapt free online apps to the university's needs. However, many Ukrainian universities did not have online platforms and infrastructure that could secure the qualitative education. On March 16, 2020, the Ministry of Education issued order #406 and letter #1-176 from March 23 that gave freedom to universities regarding the educational process organization during the pandemic (Kunichak, April 1, 2020). The pessimists from academia thought that online instruction would be at best a poor imitation of traditional education, at worst, it would turn to be a flop, as it happened in the case of created in haste All-Ukrainian Online School. It became an object of criticism due to low-quality instruction abounded in factual and methodological mistakes (Lopatina, May 12, 2020). The worst prediction was that online teaching would be helpless in the face of the crisis (Dorofeichuk, June 23, 2020). Poor technological maintenance and web-literacy of universities were the issues, but not the only ones. Student psychological unpreparedness for online teaching, the lack of online organizational, behavioral, and methodological patterns of instructors were the serious problems that could have ruined distance learning from the start (Alieva, March 31, 2020; Sakalo, May 16, 2020; Kunichak, April 1, 2020).

Problem statement: In the light of the COVID-19 pandemic revealing an actual condition of web-literacy and online sustainability in Ukraine, the research attempts to identify teachers' taking initiatives to self-educate and their becoming life-long learners as leverage to cope with the present challenge and others that may follow.

2. Methodology

The purpose of the research is to understand why Ukrainian universities were under pressure of the pandemic and to define the impacts exerted on teacher leadership, self-education, and life-long learning which became decisive in completing the academic year of 2019-2020. The authors underscore the role of teachers and pay tribute to them for the reevaluation of their potential under the circumstances. The study necessitates to further engage in self-education and life-long learning to foster leadership for qualitative education in Ukraine in response to the present and future probable challenges.

The research is empirical. The time framework and resources available are not conducive to intensive and extensive interview procedures, we are only a month after the end of the first online experience, so the study is based on the review of literature, the Internet resources, and student and faculty feedback received through mass media and university surveys. The methods used are mixed attempting to engage the qualitative and quantitative approaches to the extent the circumstances allow. Such attitudes stem from an intention to collect the information without bias defining the role of teacher initiatives, dedication, and enormous effort to survive professionally, yet, taking care of students and identifying the positive and negative aspects related to the utilization of technologies and online methodologies which appeared to have been common for the majority of the Ukrainian educational institutions and considering the probable new challenges in the fall of 2020.

The main target audience is university colleagues and students from Vinnytsia, Kyiv, Lviv, Kharkiv, Uzhhorod, Dnipro, Dnipropetrovsk universities.

Analysis techniques are to collect the information based on the latest publications and Internet resources about the pandemic university experience, voluntary surveys conducted by mass media and universities. They will provide the information about what the respondents think of the pandemic university practices and of teacher leadership, self-education, and life-long learning to be an effective response to the COVID-19 crisis. The collected material will make it possible to generalize the information for further studies, especially in teacher-training universities.

3. Findings

3.1 Benefits of unified university online infrastructure and platforms

The unified comprehensive university infrastructure and platforms enable students and educators to have access to education when they are scheduled, from where they are at the time of the lesson. The location does not matter, what matters is the access to and the quality of the Internet and the mastery of technology application (Ossiannilson, Williams, Cammilieri, Brown, 2015). The LMS lets have more than one educational environment. Furthermore, university platforms provide with omnipresent connectivity, powerful learning tools, limitless opportunities to update content and methodologies. University online infrastructure is also workable to support F2F traditional learning and to improve student-teacher communication. It facilitates student engagement, contributes to the quality of subject knowledge through multimedia learning and continuous rapport with peers and instructors (Office of Educational Technology Infrastructure, 2017; Francis, 2020; Ossiannilsson, et.al, 2015).

According to Schroeder (2001), the development of university infrastructure is important and must be similar to building a new physical campus adjoining the old campus which means to recreate all the physically existing features in a virtual space, organizational, academic, administrative are among them. In case some features are missed, the whole virtual system will malfunction (Schroeder, 2001). The well-designed infrastructure supports faculty and student needs creating classrooms for disciplines required for obtaining Bachelor's and Master's degrees. The instructional design covers lecture content delivery, instant content update with multimedia elements and research opportunities, online tests, attendance rosters, student performance control, immediate reciprocity, and feedback. Online classes improve self-organization, self-discipline, inculcate an understanding of what a deadline is, enhance the knowledge of software and hardware. On the whole, a competently created online university infrastructure works for years with minor maintenance as a fail-safe mechanism. In the face of calamities identical to Covid-19, it has all cutting- edge tools in place of old traditional ones to reach out to students, ensuring teacher accessibility, administrators and office workers at admission, enrollment, class registration procedures.

3.2 Teacher leadership and strategies

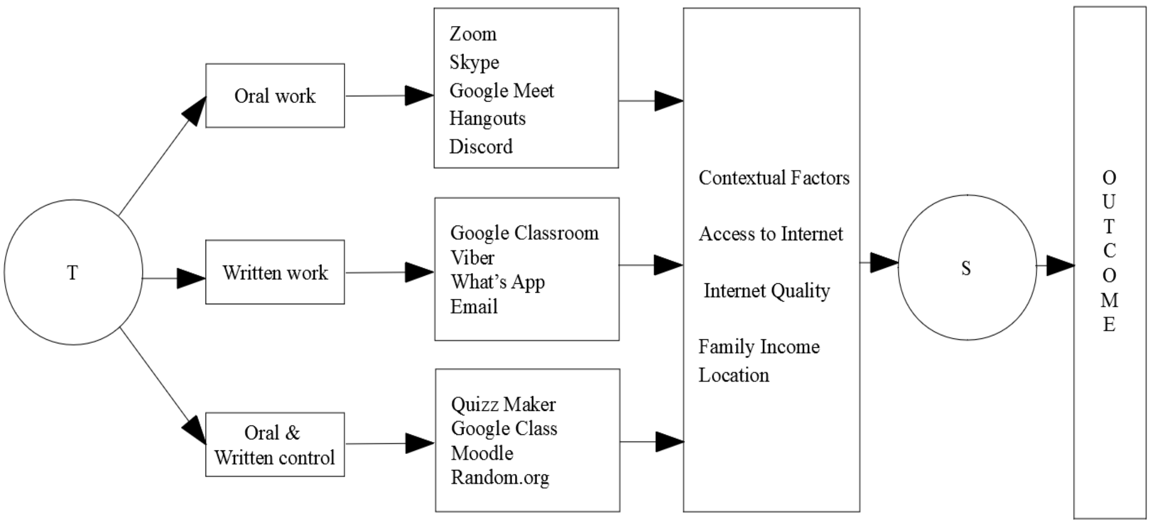
Teacher leadership is applied to teachers who have taken on leadership roles and additional responsibilities (Moore, Latimer, Villate, 2016; Tasci, Titrek, 2019). In consideration of the current research purpose, the authors suggest that building digital teaching competence should be one more strategy to foster leadership (Vladescu, 2016; Mirete, Maquilon, Mirete, Rodriguez, 2020). Under the circumstances of the Ukrainian pandemic crisis, the term digital competence for reinforcement of teacher leadership gained a special meaning. COVID-19 fueled an intrinsic demand of the teacher's nature to always serve as an agent of change, to lead to change, to always be motivating, and encouraging on the way to overcome obstacles (Barnett, Doucet, Owens, May 2020). Ukrainian educators had to respond to the pandemic challenge without having government and university support, and the current condition of distance learning proved that the utilization of informational technologies in the organization of the educational processes didn't meet the standards of modern education. Thus, the pandemic forced Ukrainian educators to take on leaders' roles to look for solutions, which exerted a positive impact on cultivating leaders in education.

Traditionally, educators refer themselves either to the category of cutting-edge teachers or functionalists regardless of the country of residence. Ukrainian academic culture is dominant and controlling students and instructors resulting in a long-established habit of aligning with the Ministry of Education directives and orders as well as with recommendations of the university administration. An old Ukrainian saying "the initiative is punishable" reflects a subconscious attitude towards leadership before the crisis. Needless to say, the pandemic forced to reconsider the leadership potential, it became a powerful impetus for taking the initiative to find tools and ways to create new learning environments without relying on the orders of controlling bodies. Rather than procrastinating and complaining about the lack of governmental and university support, instructors appointed themselves to become in charge of the organization of the educational process identifying the tools to bring students together for classes, to create virtual classrooms with secure access and passwords. They had to make decisions regarding the choice of instructional design and content delivery, strategies for student assessment dealing with attendance and performance issues (Sakalo, May 16, 2020; Lopatina, May 12, 2020). Through self-schooling teachers learned to be technical help desk personnel on demand of students and colleagues. Figuratively, teachers put the wheels of the educational process in motion on the first day of the imposed quarantine, which became an unquestionable example of commitment to leadership.

3.3. Practical implementation of the educational process

We all have a mode of operation we prefer, but the COVID-19 crisis, when broke out, required to go beyond the traditional preference, which became a matter of professional survival. By the definition of online Webster dictionary, "self-education is an act or process of educating oneself by one's effort through reading and informal study" (merriam.webster.com). In the context of the Ukrainian pandemic university, a better applicable definition says that it is a process of educating yourself by an enormous effort through vigorous informal study. To organize the online learning Ukrainian teachers had to abandon the traditional format of instruction, which turned out to be a challenge. Amplifying the challenge, only 44,5% of university professors utilized technologies and elements of distance learning in their work, 41% of university instructors and 27% of educational institutions suffered a pressing need in the methodological support in informational technology literacy and technology application, 24,1% professors were never trained in web-literacy, 38% of university students didn't have access to the Internet, 25% of university students didn't possess the necessary hardware and couldn't afford the required software, 41% of universities fell short of technical equipment during the educational process, only 45% of educational establishments prioritized distance learning and IT in the educational development (Volkov, June 22, 2020). Such terms as Zoom, Hangouts, Discord, Microsoft Teams, Google Meet were new to many students and instructors.

Figure 1. Organization of work



Nevertheless, the situation required prompt responses and immediate organizational actions. Self-education began on the first day of the quarantine, which required to identify the means enabling to reach out to each student for training. Taking into consideration that an average Ukrainian instructor teaches from 80 to 130 students per semester, that was not easy to do. The next steps were taken to find out the availability of free online learning platforms and apps, students' registration on them to resume learning under the teacher guidance. Therefore, instructors would constantly look for solutions when the suggested pattern did not work with some students. In case the slow Internet failed to connect a student to the teacher during a scheduled class on Zoom, an individual phone call was offered instead to work on the problem together. Free Zoom restricted class duration, to oppose teachers learned to schedule several sessions in a row. The quality of Skype service wouldn't meet expectations, professors would have to explore other servers and platforms. Common concerns were increasingly bringing the colleagues together regardless of the obtained scientific degrees and years of work record for brainstorming and informational exchange withstanding the crisis. No later than on the second day of the quarantine the chair and department group chats were opened on Viber, WhatsApp, Telegram. That gave a feeling of support and less isolation, it accelerated self-education, the information about the qualitative technology tools, apps, methodologies spread faster. 87% of educators asserted that in addition to a personal effort in search of knowledge, they were assisted to teach on Zoom or Google Classroom, etc. while touching base with colleagues on Viber, Telegram, etc. Students who were discouraged by the pandemic demanded more attention and insight into technology application. Plus, they had a constitutional right to a qualitative service. This became the most motivational factor to self-educate further. Very often both parties learnt together, and teachers were often only a few steps ahead of students: downloading the apps on the computers, registering on the systems, uploading written assignments. Educators would work 15 hours per day to provide qualitative education, a big part of this time was self-education.

Interestingly, despite the isolation and separation imposed by the pandemic, Ukrainian teachers and students were brought much closer. Created students' lists had to be always within the reach, instructors' personal computers, personal phones or personal Skype, Viber, Telegram, WhatsApp accounts became class registers and student grade books. Instructors' email accounts were open 24 hours a day for student assignment submissions, questions, etc. Social networks Facebook, Instagram, YouTube were used for students' engagement, information services, and control. University with its schedules, programs, and students - these all moved to instructors' homes.

Having provided mankind with multiple free online apps, the general technological advance helped bridge the gap between traditional and distance learning. The free educational apps ensured classes relevant to F2F classes with explaining, materials for discussions and tests resulting in an attempt to replicate traditional classes, which was an erroneous approach. According to Merrill (2020), when we start online, we should expect trial and plenty of errors, which did happen despite a significant effort to learn quickly.

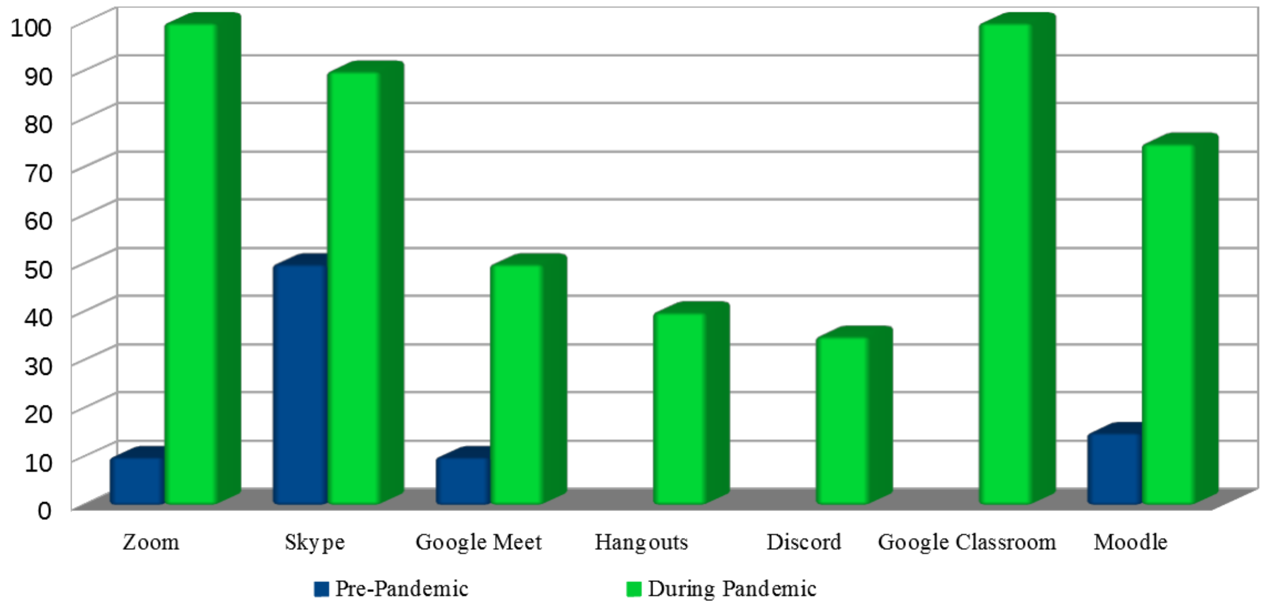
In consideration of the positive outcomes of the organizational issues in the spring semester (see Figure 1), teacher self-education and leadership ensured the consistency and successful completion of the educational process. Teachers' new digital competencies enabled delivering subject knowledge in compliance with working programs, all indispensable features of traditional university, e. g. formative and summative assessment of oral and written works, thematic evaluation, module control, final and state certification were fully aligned with traditional university time-tables that had been developed before the beginning of the spring semester. On the one hand, the strict adherence to university standard schedules resulted in less flexibility, and negatively influenced freedom of choice of time and place, it also burdened students and teachers with many hours before computers. On the other hand, little could be done with that, since the fulfillment of the official yearly academic curricula is a must for execution and the time-table is the key to the academic curriculum implementation to proceed to the next stage of education. Self-schooling equipped with knowledge of asynchronous and synchronous tools that made student engagement more productive such as Messengers, email, Telegram, Moodle, Google Classroom, Zoom, Skype, Hangouts, Discord, Google Meet effectively differentiated methodologies and approaches to teaching.

3.4. Feedback

The pandemic of 2020 forced online learning and a rapid spread of coronavirus in Ukraine did not leave much of a chance to master remote learning incrementally. The adjustment to the new format of instruction was speedy, thorny, testing teacher dedication and leadership, questioning the feasibility of the process as a whole. However, despite the enormous trial and mistakes made while transferring to online teaching, students and instructors identified positive characteristics in it (ASPI NEWS, May 18, 2020; UzhNU, April 14, 2020). Many underscored the efficacy of the format of instruction to meet the demand of the current situation to prevent the contagious disease as well as providing a more convenient and caring learning environment for work and study. Flexibility, better time management, catering for special needs, instant access to multimedia materials - the features traditional Ukrainian education needs to address better,- were distinguished as contributing to the quality of knowledge (Myasnikova, April 6, 2020; Radio Svoboda, April 18, 2020). The platforms and servers Zoom, Skype, Moodle, Hangouts, Discord, Google Meet, Google Classroom proved the reputation of reliable partners-in-education for conducting interactive classes, lectures, conferencing, and testing. Google Classroom, Quiz Makers got an appreciation for granting a formative and summative evaluation. Teachers used Zoom and Skype for the defense of theses, for passing the finals and state certification. Random.org was successfully utilized to replicate the structure of traditional examinations. 77% of students asserted that although the semester was remarkable for a challenge, it was a breakthrough in a new format of instruction resulting in positive change towards online education. Students appreciated its flexibility for combining study and work which is a dilemma for university students. 20% of students said they had not made up their mind yet, because they missed live communication with peers and teachers in the quarantine. 3% did not provide any answers. Teachers' answers about online learning were more restraint. About 55% suggested that online education should become part of academic curricula, if the university develops its online infrastructure, 45% agreed on preserving the traditional offline teaching but it should be reinforced with web-blended elements and informational technologies. Instructors admitted that they began to use more online platforms for work (see Figure 2). 100% of students and faculty voiced for developing university online infrastructure with a mandatory technical support service.

Inequality issues were exposed by the Covid-19 crisis and teachers were to learn how to address them. In the time of expensive gadgets, some students did not have a good Internet connection, others had no access to it at all. This was related to the contextual factors comprising family income and location, others did not participate in the classes hosted on some platforms because they couldn't afford expensive technology that discriminated them as outsiders in the eyes of peers and affected the outcome. Online learning revealed the deficit of working habits, self-organization, and self-discipline in 5% of students, although the cumulative points earned during the pandemic did not vary much from student performance before the pandemic. The new format of instruction did not affect negatively students with profound skills and conscientiousness. According to student feedback, some instructors lacked skills of working online, did not know how to use technology and platforms. Other students complained about poor communication with instructors, inadequate evaluation, poor explanation and delays in home assignments feedback, poor teacher accessibility, which demonstrated not all Ukrainian educators are ready to take the initiatives. However, the majority of students acknowledged appreciatively the dedication and commitment of the majority of professors to educating them in the quarantine. About 89% ranked their professors teaching as "good", 9%- satisfactory, only 2% - experienced a difficulty to discern.

Figure 2. Use for work: pre-pandemic and during-pandemic



4. Results, Conclusions, and Recommendations

To meet the objectives of the research the literature review, Internet resources, faculty, and student feedback were analyzed regarding the preparedness of the Ukrainian education for the challenges forced by Covid-19 and teacher leadership, self-education to resist the crisis. In parallel, technological proficiency, web-literacy, Ukrainian universities' online platforms, and infrastructure sustainability are addressed as the key factors that could have eased the challenge. Our research revealed the insufficiency and poor relevance of many Ukrainian higher educational establishments to the present challenge. But our results demonstrated the role of self-education and teacher leadership is proven to have been decisive to face the pandemic.

The authors conclude that the COVID 19 crisis facilitated opportunities to make a breakthrough in self-education and life-long learning (Dorofeichuk, 2020). The changes began with the reconsideration of the teacher role as leaders and agents of change. Ukrainian teachers rather than waiting for the recommendations and governmental directives took the initiative to look for ways in providing the consistency and efficacy of the educational services. They had to learn much, to acquire new skills and competences with a firm assurance that it will grow into on-going life-long learning.

Judging by the coronavirus dynamics, we are prone to believe, that the crisis is unlikely to be over in the fall of 2020. That is why we also conclude that the only viable way is to confront the challenges with obtaining the new digital competences and skills that will help shift education online (Witze, June 1, 2020; Li, April 24, 2020; Francis, July 2, 2020). Online learning is not the antipode of tradition anymore, due to the COVID-19 crisis it is becoming tradition itself. Life-long education is a life necessity the pandemic asserts (Lopatina, May 12, 2020).

The authors recommend that Ukrainian universities should continue to improve the material and technical basis to create online university infrastructure and adapt free educational apps to their needs;
university support of teacher web-literacy development and mastery of technology application is recommended to become mandatory through professional enrichment programs, inside university experience exchange, collaboration with international partners, participation in the international webinars, seminars, workshops, and conferences;
as the quality of online education is questioned, teachers should get more preparation in the online methodologies of content delivery, getting access to innovative resources, professional enrichment opportunities, collaborative work on the development of complex programs to enhance the quality of self-education and life-long learning effects on their proficiency and teacher leadership to encourage students to self-educate and develop leadership qualities for future effective citizenship;
university academic curricula and working programs of teacher-training universities should be reinforced with obligatory classes in methodologies of teaching online with the specific focus on planning, instruction, time management, and assessment strategies;
Ukrainian annual university ratings conducted by the Ministry of Education and Science of Ukraine should include the rubrics about the university online infrastructure and preparedness for teaching online;
universities should address the Minister of Education to reconsider the approaches to a teacher working load and include online classes into it;
the first experience of Ukraine's mass remote learning should be studied and an adequate evaluation should be given to the role of teacher leadership, self-education, and life-long learning to encourage the discouraged to learn, despite the obtained degrees to avoid challenges in the future.
The authors do not recommend that educators should abandon traditional teaching. It has many advantages and accomplishments in Ukraine, but as pandemic has become a reality of our life, we should pursue aggressively the ways to live with it. Teachers are recommended to never forget that life-long education is more than a degree (ICLEL18Video.mp4).

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Pandemic and Me: College Students' Interpretations of Pandemic

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Abstract
Pandemic is a global issue effecting community in different ways. This research is about College students' meaning making of "pandemic". One of the major fields of life effected negatively from pandemic is the field of education. For students and instructors who has no experience with distant learning, compulsory distant education and online exams period came very suddenly. Based on this sudden change, the purpose of this research is to understand "how College students are making sense of pandemic". It is a Phenomenological mixed method study. Participants were 534 students form 19 universities. A survey, arts-based inquiry and journal entries were used to collect data. Analysis with MaxQDa 2020 and researchers' interpretations presented in the paper.
Keywords: Pandemic, college students', mixed method study.

Introduction

Covid-19 is the latest pandemic caused a health emergency and global threat. As of June 27, 2020 9.633.898 people were infected with COVİD-19, in 216 countries in the world (WHO, 2020). Due to high spread rate of Covis-19 countries closed schools to prevent school age children from infection. Number of children and adolescents affected with school closure for Covid-19 was more than 150 million in in 165 countries in March 2020 (Xiang, Zhang & Kuwahara , 2020). School closures, prolonged "stay at home" conditions are still valid for many countries. Therefore, Covid-19 has a drastic impact on people by causing physical and mental health problems. Loosing muscular fitness, gaining weight, psychosocial problems and poor academic achievement might be addressed among the negative outcomes of the situation. Evidences from research studies suggest that it may not be easy to get rid of these negative impacts during adulthood (Xiang, Zhang & Kuwahara, 2020). It is obvious that parents, teachers, and even the Ministry of Education workers need to have a better understanding of the situation to overcome its negative impacts. "how young people, more specifically College students make sense of pandemic (Covid-19) and its impact in their life is the focus of the paper with the aim of better understanding of their experience. There is a huge amount of Covid-19 literature in the field of health and to some extend in health education in 2020. Generally, how Covid-19 is effecting people with different health problems like hypertension and diabetes (Fang et al., 2020; Gupta et al., 2020; Klonoff & Umpierrez, 2020), cardiovascular problems (Akhmerov & Marban, 2020; Clerkin, Fried, Raikhelkar, Sayer, Griffin, Masoumi, Jain, Burkhoff, Kumaraiah, Rabbani, Schwartz & Uriel, 2020; Liu, Blet, Smyth & Li, 2020), obesity (Albashir, 2020; Kassir, 2020; Sattar, McInnes & McMurray, 2020) and many others. In all these research studies, how people having with severe health problems will be affected with Covid-19 were discussed and how individuals may protect themselves from infection as well as why need to protect are underlined. Many of these research studies addressed mental health problems due to new life conditions such as "stay at home" cautions (Gavin, Lyne & Mcnicholas, 2020; Pompeo-Fargnoli & Fargnoli, 2020; Seidi, Ardebil & Jaff, 2020). It is obvious that all the above research studies are still related to health studies. There are also several research studies about prospective or in-service health professionals and how they were effected with Covid-19 psychologically and mentally (Miller et al., 2020; Shanafelt, Ripp & Trockel, 2020; Tsamakis, Rizos, Manolis, Chaidou, Kympouropoulos, Spartalis, Spandidos, Tsiptsios & Triantafyllis, 2020). Some literature underlines community health and how Covid-19 preventions effect different parts of the community, more specifically, people of ages under 15 and above 65. Literature review gives several research studies about Covid-19 from Turkey focused on its treatment (Chandy, Nasir, Srinivasan, Klass, Nicolaou & Babu, 2020; Demirbilek, Pehlivanturk, Ozguler & Mese, 2020; Simsek Yavuz & Unal, 2020), effects on community and economy (Acikgoz & Gunay, 2020; Bostan, Erdem, Ozturk, Kilic & Yilmaz, 2020; Ogutlu, 2020; Satici, Saricali, Satici & Griffiths, 2020) components. There is also very limited number of studies focused on how Covid-19 effected the education in Turkey. Almost all of these studies focused on how students in Turkey were effected with school closures and online education (Pinar & Akgul, 2020; Ozer, 2020). How university students make sense of pandemic as well as how they explain their feelings about pandemic seems to be a gap in literature. Given the fact that this research is designed in mixed methods with the purpose of understanding how College students in Turkey make sense of pandemic (Covid-19). With this purpose, following research questions will be addressed in this concurrent mixed methods study.

- How school closure and distant education effect College students' feelings and thoughts about educational processes in Covid-19 period? (Quantitative-RQ).
- How College students make sense of pandemic and its effects on their feelings and thoughts about life (Qualitative-RQ)
- What is college students overall self-interpretations about "me in pandemic" ? (Integration Q.)

Theoretical framework
Covid-19 is a complex global problem to be worked with multidisciplinary and transdisciplinary views (Arnault & Fetters, 2011). Not only in Turkish but also in general literature, research studies focused on Covid-19 and its effects in community including youngsters in the universities, designed either quantitative-descriptive or qualitative- case studies methods. At least in Turkey, none of Covid-19 research studies were designed in mixed methods, although mixed methods research was more preferable in health-related situations examined. Therefore, understanding this complex problem requires multilevel and mixed methods research.

Method
Based on the research questions listed above, this research is a phenomenological study designed in concurrent mixed method. The design involves conducting a two-facet study concurrently, and one of the facets has an emphasis greater than other (Leech & Onwuegbuzie, 2009). Parallel to this definition this research study has quantitative and qualitative facets and qualitative facets has greater emphasis. It is concurrent mixed method design with qualitative emphasis, meaning unequal weight and results were merged during interpretation.
Research participants
Participants of this research study were 534 College students attending 19 universities located in 13 cities of Turkey. All were volunteer to participate. Researchers of this paper shared data collection tools with their colleagues in 19 universities and each of them shared the tools with their own students. Those who were volunteer to participate filled and returned data collection tools. Some demographical values were listed in table 1 and 2 below.

Table 1: Participants' gender, level and university variables

Variable	**Grup**	***f***
Gender	Woman	454
	Man	81
Level	Freshmen	90
	Sophomore	125

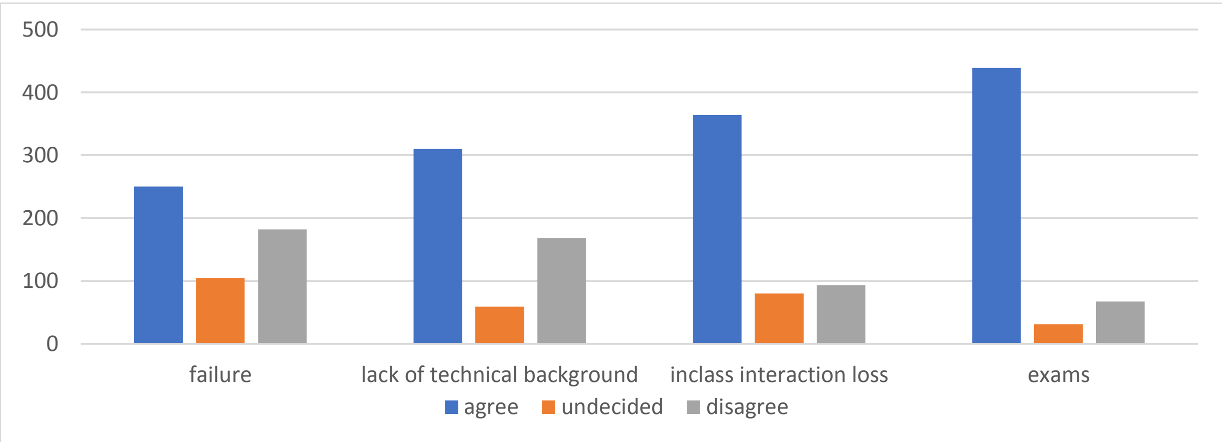
	Junior	149
	Senior	171
University	Public	378
	Private	156

In the concurrent facets of the study for the quantitative research question "How school closure and distant education effect College students' feelings and thoughts about educational processes in Covid-19 period?" an online survey was formed. There were 6 personal questions asking information about schools they attend and distant education system in their schools, and 20 main questions including sub questions in different numbers asking their feelings and thoughts about school closure, distant education, measurement and evaluation, quality of instruction, quality of instructors and as well as asking advantages and disadvantages of distant education in the survey. There were also some open-ended questions to understand how pandemic effected their thoughts about their education. For the second, qualitative facet of the study, there were two data collection tools, art-based inquiry and journal entries to answer the qualitative question, "How College students make sense of pandemic and its effects on their feelings and thoughts about life; what is pandemic for them, how they feel in general and what they think about life in near future?" and used to collect data. In the art-based inquiry, participants were asked to draw a picture of themselves showing how they feel in pandemic with the title of "pandemic and me". Finally, research participants were asked to write a journal entry with the same title to enhance their picture. With these two primary data collection tools qualitative facet of the study has the greater emphasis.

Findings

For the quantitative part, reliability coefficient of the questionnaire used in survey is found as (Cronbach α=0,77). Data analysis displays that participants have great amount of hesitations about the exam and how the exams be graded. Figure 1 displays the statistical values for related question.

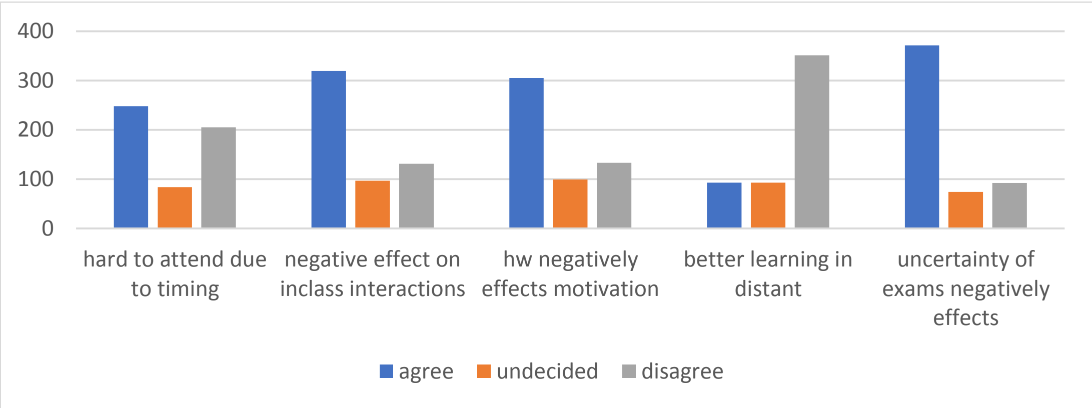
Figure 1: Hesitations about distant education



Participants hesitations about distant education at the first-time hearing can be put in order of importance according to numbers in figure 1 as exams, lack of in class interactions, lack of technical background necessary to follow the courses and fear of failure. Most of the research participants (%66.7) emphasized that theoretical lessons are more likely appropriate for distant education. They (%33.3) mostly believed applied courses need to be face to face in every occasion due to lack of practical experiences.

During distant education, participants feelings about the process were examined in two components; instructions and system. How participants feel about the instructions and how they think about the system in general were displayed in figure 2 and 3 correspondingly below.

Figure 2: Participants' feelings about instructions



Participants' feelings about instructions are mostly negative as summarized in figure 2. Data displays that time change due to distant education is not the focus of the participants. Some (248) of them finds hard to attend but others (205) finds no difficulty. For the following 3 items about negative effects of distant education on their learning, 319 of the participants agree for classroom interactions, 305 of them agree for motivation and 371 of the participants agree on uncertainty of exams as the negative effects of distant education on their learning. 351 of the participants disagree on the only positive effect of the process in better learning.

Figure 3: Feelings about distant education system

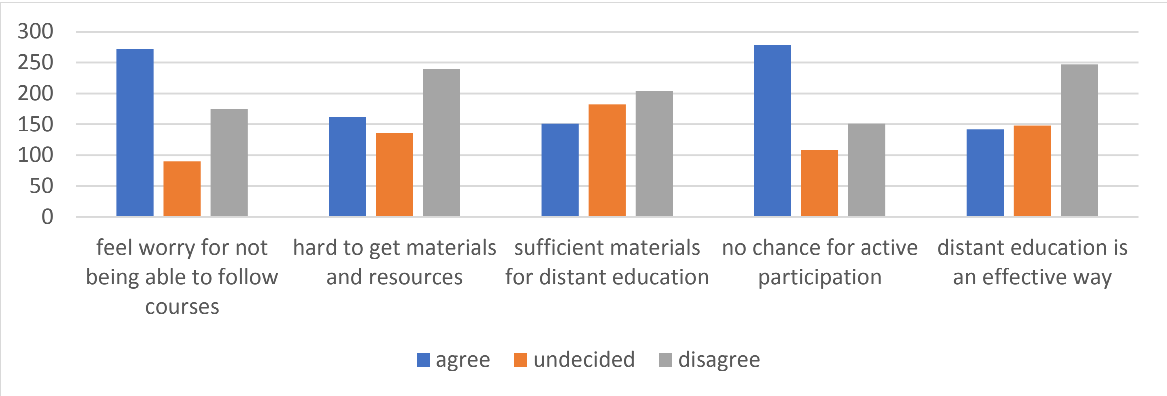


Figure 3 displays 247 of participants disagree that distant education is an effective way of teaching but easy to get materials and resources (239). Lack of active participation (278) and worry in following the courses (272) are also cited negative issues about distant education.

Open ended questions in the quantitative data collection tool were open coded by 2 of the researchers by using MAXQDA 20 and intercoder reliability was found 91.49%. Codes and themes emerged from open ended questions are mapped with MAXQDA 20 as in figure 4.

Figure 4: Open coding analysis of open-ended questions

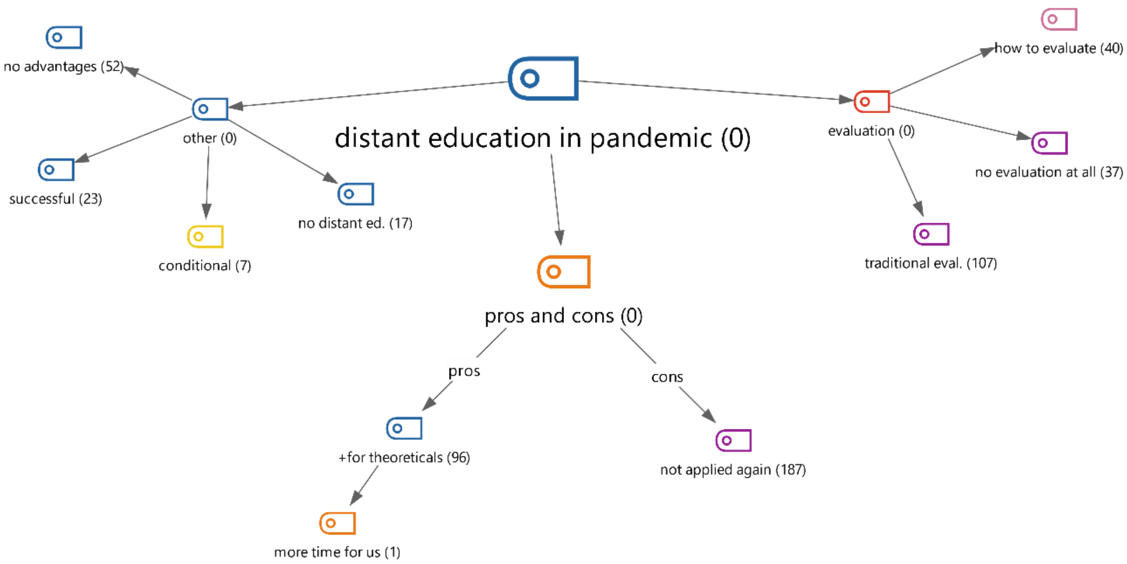


Figure 4 displays codes related to distant education theme. Codes and sub-codes lead the researchers make the following assertion about the study.

> Assertion 1: Participants to this study have conditional positive feelings about distant education and most agree on the appropriateness of the system for not practice-based but theoretical courses with traditional evaluations.

Following excerpts from questionnaire display participants explanations parallel to assertion.

> "…I don't think any valid evaluation type …but I quess classical exams or test are the best..." (P. 234)

> "…lack of practice for our practice-based courses is the negative side of this system. The best way to learn is make it repeat in summer courses…no advantages at all…" (P.421)

> "…I believe in any occasion it must not be the way of teaching. Talking to our friends and to teacher make you learn a lot this is missing…" (P.500).

Excerpts above are also supported with qualitative data collected in this research. For the qualitative part, data analysis done with MAXQDA 2020 program. Pictures and journal entries were open coded separately and interpreted together with survey findings. Intercoder reliability for open coding is 0.95.

Figure 5 and 6 examples how pictures were open coded and analyzed by the researchers.

Figure 5: Pandemic and me picture example1

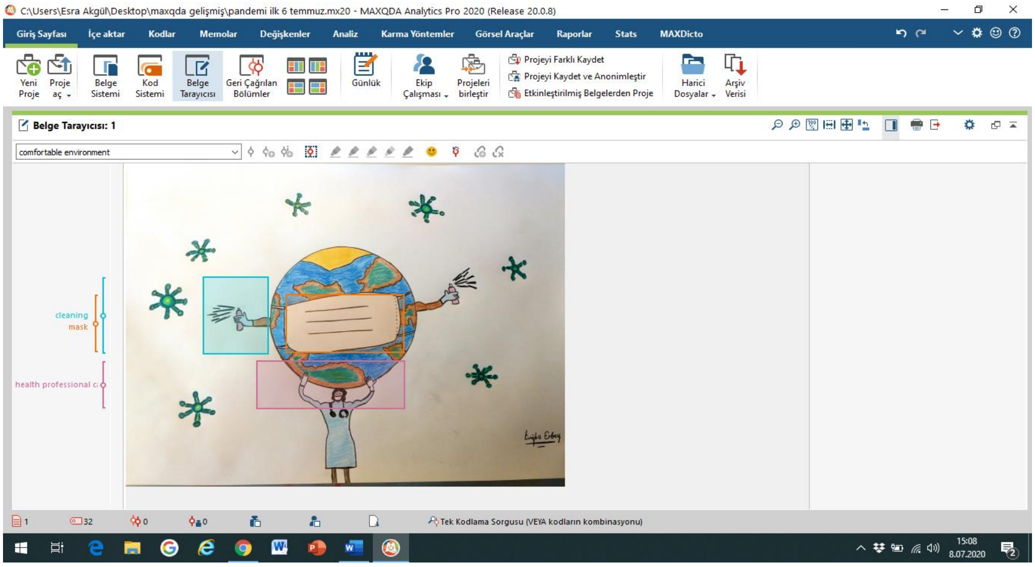
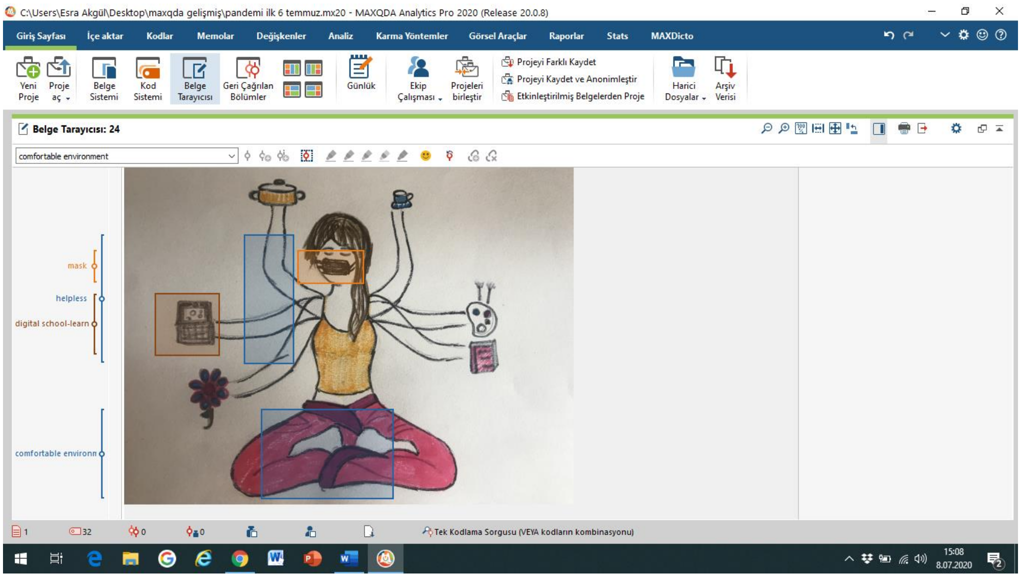
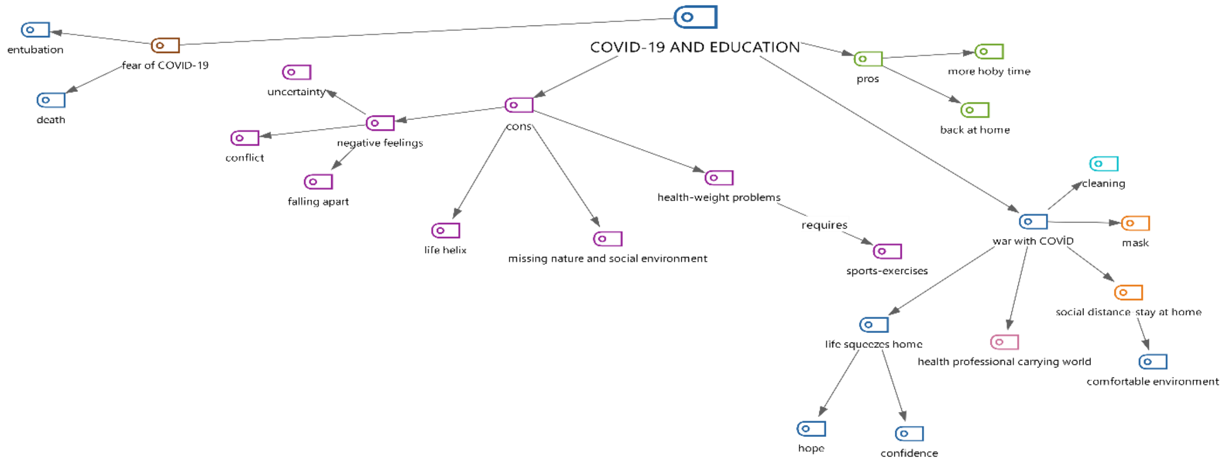


Figure 6: Pandemic and me picture example 2



The last data collection tool, journal entries asking about school closure and distant education effected participants feelings and thoughts about educational processes in Covid-19 period may not be shared due to language preference. Entries are in Turkish and it is not appropriate to sample in this article. But entries would be included final analysis. Analysis of pictures and journal entries were also done with open coding and codebook created for open-ended questions in quantitative part was used and extended when necessary. Qualitative analysis of pictures and journal entries gave the following theme and code-sub-code system as in figure 7.

Figure 7: Qualitative analysis of pictures and entries



Findings from qualitative data collection tools can be summarized with an assertion as follows.

> Assertion 2: Participants to this study evaluated pandemic's affects on their education with pros and cons parallel to assertion 1 and value "life squeezes at home" as the key for hope and confidence in the war with COVID-19.

Participants explained their negative feelings based on the restrictions due to pandemic as listed under "cons" theme in figure 7 above. Uncertainty, conflict and feel of falling apart are the ones appeared mostly in codes. Parallel to figure 2, most participants proposed uncertainty of exams and evaluation as their primary concern in the pandemic. Uncertainty is not for exams only, it is in every aspects of life. What is the amount of time for "School closure", next semester? Next year? Can we go out this weekend? Or stay at home? How long will it take to go for a cup of coffee with my friends? All are uncertain. In some of the research studies mentioned in introduction of this article, researchers addressed mental health problems due to new life conditions such as "stay at home" cautions (Gavin et al., 2020; Pompeo-Fargnoli & Fargnoli, 2020; Seidi et al., 2020). Therefore; feeling of falling apart may be a conclusion led by caused by the negative feelings due to uncertainty of life.

How all these findings informed researchers to answer the research questions is explained in the result and discussion section below.

Results, Discussion and Recommendations

How school closure and distant education effect College students' feelings and thoughts about educational processes in Covid-19 period? (Quantitative-RQ).

Most of the participants in this research study expressed negative feelings towards distant education. Lack of technological background, uncertainty of exams and evaluation methods, loss of social interaction with class, and not being able to participate actively to online lessons were among the issues create their negative feelings. It is known from the literature that web-based, online education programs have difficulties related with students, instructors and technical background (Bilgic and Tuzun,2015). Bilgic and Tuzun (2015) If lack of face to face interactions in online education may not be supported with technology, students expectations were not met and students may feel isolated. Additionally, in some other research studies designed to evaluate students' perceptions about distant education, participants emphasized negative perceptions about distant education and inefficiency in reaching learning outcomes cited in programs (Adanır et al., 2018, Dogan and Tatik, 2015). Findings of this research is consistent with the results of these studies in lierature.

How College students make sense of pandemic and its effects on their feelings and thoughts about life? (Qualitative-RQ)

Participants argued how the field of education is affected with COVİD-19 in their pictures and journal entries. Their interpretations about pandemic mostly relies on distant education and how it worked negatively and ineffectively in their life. They define pandemic as a war to vin with mask, hygiene and social distance as displayed in figure 7.

What is college students overall self-interpretations about "me in pandemic"? (Integration Q.)

Participants self-interpretations based on their drawings may be summarized as "me in pandemic was expressed as feeling of being trapped for security". In almost every picture, participants draw themselves in a big trap, labyrinth with many closed roads, cages, or a room with a big window, very lonely and sad. Participants also expressed in their journals that staying at home may bring hope and confidence.

Plagiarism Rate=1 %

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The Covid 19 Pandemic and Challenges Faced When Implementing Online Learning by Lecturers at the Faculty of Islamic Studies in Universiti Kebangsaan Malaysia

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Abstract
The Covid 19 Pandemic that is currently ravaging the world also affects the teaching and learning process implemented in institutions of higher learning (IPT) in Malaysia. Online teaching, made mandatory by the government in all IPTs, is a new approach introduced by lecturers, which previously only made up 40% of online teaching sessions. Lecturers in the Faculty of Islamic Studies in Universiti Kebangsaan Malaysia (UKM) have faced challenges in implementing online teaching and evaluation because some subjects, specifically those that are *Turath* in nature, are not suitable to be taught online as the lessons require face-to-face sessions. However, impact of the Covid 19 Pandemic requires lecturers to think of a new strategy for delivering teaching sessions so that the TnL process is carried out properly and not disrupted due to the Covid-19 Pandemic. This study intended to examine the challenges faced by lecturers, especially in the field of Islamic studies in UKM, when implementing fully online teaching sessions. The study used a qualitative design involving interviews with lecturers at the Faculty of Islamic Studies in UKM. Findings revealed several challenges when facing the new norm of online teaching, such as time constraints, acquiring new knowledge and maintaining the quality of teaching. Lecturers faced each of these challenges with support and assistance from the university through online guidance besides weekly monitoring of online teaching by lecturers.
Keywords: Covid 19, pandemic, online teaching, Islamic studies, Universiti Kebangsaan Malaysia

Introduction

The world is being ravaged by the Covid-19 Pandemic and its effects include the Teaching and Learning (TnL) process in the university. This easily infectious pandemic indirectly creates a requirement for a new knowledge delivering technique, which also involves lecturers from the Faculty of Islamic Studies in UKM. Even before the government issued the MCO, UKM had encouraged its lecturers to implement 40% of their teaching via online or also known as blended teaching. However, after the MCO was issued by the government as well as circulars by the Ministry of Higher Education stating that the teaching process should be implemented fully online, there was a new norm related to how lecturers deliver their teaching sessions. This process of change required comprehensive action by lecturers to properly implement online teaching as well as not to be prejudicial to students' learning process. This article specifically discusses challenges faced by lecturers at the Faculty of Islamic Studies in UKM, who are forced to face the changes that affect the implementation of their teaching sessions.

Methodology of the Study

This study applied the qualitative design by using face-to-face and non-face-to-face interview instruments to obtain information. Respondents comprised lecturers form the Faculty of Islamic Studies who are directly involved in managing undergraduate and graduate studies, namely the Deputy Dean of Undergraduate Studies, Deputy Dean of Graduate Studies, Assistant Dean of Teaching and Heads of Programs. Besides that, other interviewees were lecturers teaching subjects or courses that are *Turath* in nature and Faculty Compulsory subjects because these courses involve many students, which is all the students in a specific program. Respondents were selected using the purposive random sampling method. The interview questions were unstructured and focused on 3 aspects of the main challenges in managing online teaching, such as time constraint, enhancing new knowledge and maintaining the quality of teaching. Data were obtained from

Circulars issued by UKM and the Faculty of Islamic Studies throughout the MCO, which is from 18 March 2020 until the examinations for the 2nd semester (2019/2020) finish on 17 July 2020. Data were descriptively analysed.

Findings

The Covid 19 Pandemic, which can infect anybody, had forced the government to issue the Movement Control Order (PKP) under the National Security Council (MKN). This order was issued by the Malaysian Government on 18 March 2020. At that time, students in Institutions of Higher Learning (IPT) in Malaysia had just started their 6th week of studies. The teaching process was changed to become fully online and students' academic learning schedules were also amended. 6 weeks of holidays (Special Event Holidays) were declared due to the MCO and began on 18 March 2020 until 26 April 2020 (Academic Circular Num. 13/2020). Mid-Semester Holidays that was originally supposed to begin on 28 March 2020 was brought forward a week due to the MCO (Academic Circular Num. 13/2020). This change in dates involved learning at all levels, such as the Undergraduate and Graduate levels. The entrée of new semester 1 students (2020 – 2021) had to be rescheduled to a new date beginning 12 October 2020 (Academic Circular Num. 18/2020). Beginning 18 March 2020 various circulars were issued by the Ministry of Higher Education, the university as well as the Faculty for managing the teaching and learning (TnL) process in the university so that it ran smoothly according to the MCO's SOPs. One of the instructions in the circular was the order to implement compulsory teaching that was fully online. The circular was in adherence to the Social Distancing Order that was mandatory throughout the MCO. Learning was fully online and was the best option to continue with the learning process so that students were not left behind in their endeavour to obtain knowledge because there were only 8 study weeks left. Therefore, the university had empowered the online learning platform so that lecturers' teaching process and students' learning process were carried out smoothly.

Online Learning in Universiti Kebangsaan Malaysia

The official online learning platform in UKM is the UKM Folio system or *UKM Learning Management System* (https://ukmfolio.ukm.my). This new system was introduced in early 2020 compared to the IFolio before it. According to Mohd Hamdi Abd Shukor, the Vice Chancellor of UKM, the university had prepared the new infrastructure, namely the UKM Folio, which was created based on the *Moodle*, a platform for teaching and learning that facilitates students and lecturers to send and receive assignments (Aini Hidayah Abdul Hadi : 2020). Online learning in UKM after the MCO was implemented using two approaches, namely the Synchronised and Non-Synchronised Learning approaches. The Teaching and Curriculum Development Centre (Teaching-UKM) had issued a guideline specifically for students regarding the use of the UKM Folio. This was intended to guide students since this was a new system introduced by the university compared to the old system, which was the I-Folio. UKM lecturers were recently introduced to the use of the UKM Folio system and most lecturers had not fully explored the system yet. In the UKM Folio, Teaching-UKM had prepared tutorial videos, specifically for lecturers, on how to use this system when delivering the curriculum to students. Synchronised teaching, such as delivering lectures through Google Meet, Microsoft Team or other platforms, are methods that are similar to actually meeting students or lecturers though it is online. Lecturers can communicate with students through synchronised teaching activities just like when they meet students face-to-face except that the limitation would be the absence of direct contact with students.

The TnL Approach in the Faculty of Islamic Studies, UKM

UKM's Faculty of Islamic Studies offers 5 main programs, both at the Undergraduate and Graduate levels, such as Syariah Studies Program, Usuluddin and Philosophy Studies Program, Arabic and Islamic Civilisation Studies Program, al Quran and al-Sunnah Studies Program as well as Dakwah and Islamic Leadership Studies Program. Studying subjects related to Islamic Studies, especially those that are *Turath* in nature, is frequently associated with face-to-face learning or *Talaqqi* (Syed Salim Syed Shamsuddin 2018: 29). Face-to-face learning with eye contact has greater effects compared to online learning. Online learning carried out by the Faculty of Islamic Studies pre Covid 19 was practiced by lecturers when assessing and evaluating students' assignments, whereas lectures were held face-to-face. When the Covid 19 struck, lecturers were forced to adhere to the government's orders and control their movements as well as the need to implement 100% online learning sessions. Some lecturers were steadfast that Islamic studies cannot be taught fully online and should be partially implemented face-to-face. Nevertheless, due to the Covid 19 Pandemic, beliefs such as this became impractical because it involves the adherence to SOPs established by the government for delivering teaching sessions during the MCO period.

The university had issued circulars to encourage lecturers to implement student assessments as a continuous evaluation process throughout the MCO. Although this was not made mandatory by the university for all subjects, hence, the university strongly encouraged lecturers to change their assessments in the proforma, which previously implemented final examinations only by continuous evaluation. This was intended to curtail the spread of the Covid 19 Pandemic when there is a large gathering, such as in the Examination Hall. However, if lecturers still wished to have the final examinations for evaluating their subjects, it should be implemented online. Online examinations are a new thing for lecturers in UKM because previously, final examinations were implemented face-to-face with students in an examination hall. In order to overcome the issue of integrity when implementing online examinations, the Centre for Teaching and Curriculum Development (Teaching-UKM) had issued Guidelines on Methods for Handling Integrity Issues by the Academy of Undergraduate Online Examinations using features in UKM Folio. The guidelines were enforced on 6 April 2020 (UKM Teaching Circular Num.2/2020).

In UKM's Faculty of Islamic Studies, lecturers who still maintained the final examinations during the MCO included 27 subjects from both the undergraduate and graduate programs (Hasanah AK: 2020). The total number of subjects for both the undergraduate and graduate programs for semester 2 (2019 – 2020) involved 170 subjects (Undergraduate Section FPI). This means that approximately 14% of lecturers from FIS who still maintained the final examinations for their subjects during the MCO had made evaluations and assessments objectively based on the Course Learning Results (HPK) that have been established. The university and FIS encouraged lecturers to fully make course assessments through Continuous Evaluations during the MCO. However, some courses involved a large number of students, such as courses labelled Faculty Compulsory and thus, making it difficult for lecturers to make assessments through individual assignments. Therefore, the choice to make assessments based on final examinations was aimed at facilitating the course supervisor involved when giving marks to students because it involved several HPKs in the question papers distributed. Comparatively, if individual or group assignments only involve a specific HPK, then the lecturer has to give more assignments compared to choosing to making assessments based on the final examinations. This is another reason why the course supervisor still maintains the final examination format, especially for courses that are Faculty Compulsory and involve a large number of students. However, the encouragement by the university and faculty that lecturers make continuous evaluations during the MCO received a good response from lecturers compared to previous semesters.

Results, Conclusions and Recommendations

The circular issued by the Ministry of Higher Education related to the teaching process states that lecturers need to fully implement online teaching and learning sessions with their students (KPT's Media Statement: 2020). This matter required the practice of new norms by lecturers who had to learn new techniques for delivering online teaching. Previously, online learning occurred in 40% - 50% of cases. This new technique had to be practiced so that students can follow their lessons. Interviews involving several selected lecturers from the Faculty of Islamic Studies found several challenges when implementing online teaching sessions. Lecturer 1 from the Usuluddin and Philosophy Studies Program stated that he learned the online teaching technique through YouTube. Besides the video tutorials prepared by Teaching-UKM, lecturers were forced to look for new techniques and search for suitable methods by looking at approaches implemented by others in YouTube. Lecturers who previously were not familiar with delivering knowledge online, were now forced to learn the use of technology related to the knowledge delivering process.

Challenges from the Time Constraint Aspect

One of the challenges faced by lecturers was time constraint. Due to the MCO that started when students were attending lectures during the sixth week, planning for the remainder of the 14 weeks of teaching had to be scheduled even before the semester began. Lecturers were forced to think of new strategies and changed the teaching proforma to rearrange the whole process of delivering the teaching curriculum to students. This is because the MCO does not allow lecturers to implement face-to-face teaching sessions with students. Therefore, the delivery method for the remainder 7 – 8 weeks of lecture sessions had to be changed to fully online learning. This is a challenge that lecturers had to face due to the time constraint in restructuring the teaching method. The curriculum delivery method was fully restructured to online sessions and lecturers had to take action and make decisions about changes in the proforma by changing to a new method suitable with the SOP established by the government for the MCO period. Besides that, changes in the method of assessment need to be conveyed to students due to time constraints and remaining teaching weeks so that students can finish their assignments and not to burden students with an overwhelming workload of assignments. These are some of the challenges of time constraint that lecturers must face when managing online teaching sessions due to the Covid 19 Pandemic.

Challenges of Enhancing the Knowledge Aspect

Other challenges faced by lecturers were the enhancement of knowledge and skills from a technological aspect. This new norm has forced lecturers to increase their knowledge on technology and online learning. The university had introduced the synchronised and non-synchronised learning methods as a guide for lecturers when choosing the right method. UKM's Centre of Teaching had prepared several tutorial videos as a guide for lecturers when implementing the TnL using technology. This is a challenge for lecturers as they have to fully understand this technology that will be applied when implementing online teaching during the MCO. Most synchronised online learning tools are something new to the lecturers, such as using Google Meet, Zoom and Microsoft Team. One of the most common techniques used by lecturers is Facebook Live, however, it is rarely used for delivering lecturers. Previously, online learning was not intended for lectures but for delivering online assignments and quizzes. Lecture materials are delivered to students prior to lectures so that students can read and prepare before a lecture session begins. Therefore, the MCO has caused lecturers to learn the online lecture delivery method, which is related to synchronised learning mentioned earlier. Although it is a challenge for lecturers to enhance their knowledge on technological skills, there is a blessing in this Covid 19 test whereby it forces lecturers to learn technological skills consistent with the learning method in the 4.0 era (Faizah A Majid, Ainul Azmin Md Zamin : 2019). Encouragement at the higher education level in Malaysia has stimulated lecturers to change the TnL method in line with the 4.0 era, which is to be implemented to the maximum during the MCO.

Challenge from the Aspect of Maintaining Quality

Challenge from the aspect of maintaining the quality of teaching cannot be compromised because of the Covid 19 Pandemic. Lecturers cannot rely on the excuse of the Covid 19 Pandemic to avoid delivering quality lectures to students. Hence, the university took the initiative to monitor lecturers on a weekly basis, so that the lectures are still held though with limitations due to the pandemic. Besides that, circulars issued by the Teaching Unit and the Faculty in UKM had also emphasised on the quality of the assessment, especially the method for handling students' academic integrity issue as it involves online tests (UKM Teaching Circular Num. 2/2020). The virtual world is exposed to students' integrity issues because all kinds of information can be accessed online, and students can communicate between themselves during the tests. Therefore, the university also emphasised that lecturers prepare High Level questions since examinations are carried out online or using the Open Book Examination style. As for semester 2 (2019 – 2020), which is during the MCO, not many lecturers (14%) at the Faculty had chosen online final examinations (Undergraduate and Graduate), hence, the Faculty and the University had to monitor the quality of carrying out online final examinations based on the guidelines and Circulars issued.

The three challenges related to TnL online, as mentioned earlier, are challenges generally faced by any lecturer when fully implementing online teaching programs. The uniqueness of Islamic studies subjects from a traditional aspect is learning in a *Talaqqi* or face-to-face manner. However, the Covid 19 Pandemic has changed the learning approach that is fully implemented online by lecturers. Although online teaching is just for one semester (Semester 2, 2019-2020), it is not known when this pandemic will end. Nevertheless, challenges faced by lecturers, especially from the Faculty of Islamic Studies in UKM, when handling online teaching, is a new experience that they have never encountered before. The online learning approach, either involving lectures or evaluation of students, provides values in terms of experience and knowledge to these lecturers as well as the university when managing risks and problems such as the Covid 19 Pandemic. Each field has its uniqueness regarding procedures for delivering knowledge and teaching students, including the field of Islamic Studies, which traditionally requires face-to-face learning. Therefore, due to this pandemic that has had an implication on Islamic Studies lecturers, changes have called for a more suitable delivery method that applies a different platform, which is in the form of fully online TnL sessions. This study is specifically related to Islamic Studies. Each field has its own uniqueness and approaches when using the online learning initiative. This study was specific to challenges faced by lecturers when implementing online teaching. Challenges faced by students are not mentioned in this study. It is suggested that future studies focus on challenges faced by students when pursuing online learning during the MCO.

Plagiarism Rate = 6%

Wabak Covid 19 dan Cabaran Pensyarah dalam Pelaksanaan Pengajaran Dalam Talian di Fakulti Pengajian Islam Universiti Kebangsaan Malaysia by Muhammad Arif Yahya. Submission date: 15-Jul-2020 04:40PM (UTC+0800) Submission ID: 1357763226 File name: aksanaan_Pengajaran_di_Instituti_Pengajian_Tinggi-_Covid_19.docx (24.38K) Word count: 3059 Character count: 20633 6% SIMILARITY INDEX 4% INTERNET SOURCES 0% PUBLICATIONS 4% STUDENT PAPERS 1 1% 2 1% 3

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Consumers Perception of the Impact of Coronavirus (COVID-19) Transmission on Businesses in Malaysia

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Abstract

Consumers' perception can be a benchmark to businesses that occurs in the situated consumers live in or can be as a general overview to measure the current situation. Likewise, the impact on business that sparked from the Coronavirus (COVID-19) has no exception from consumers' perception in all over the world. However, this paper focuses on the positive and negative impact of the spread of COVID-19 on business from consumers' point of view. As the phenomena are new, there are no studies on the impact of COVID-19 on consumers, especially in Malaysia. Therefore, the study aims to identify the impact of COVID-19 transmission on businesses in Malaysia. For data collection, this study employed an online survey system with a self-administered questionnaire that has been distributed all over the country via social media with a return sample is 400 respondents. The findings reveal that six positive and four negative impact of COVID-19 transmission on business in Malaysia. The study also reveals the most place the respondents spending their money on food, which is the supermarket. The findings also revealed five reasons the selection of the place that the consumers spending are : (1) easy to find almost every type of products for daily needs; (2) the price is cheap; (3) one-stop-centre; (4) less crowded; (5) wide area and easy to practice 'social distancing'. The study aims to enrich the discourse on businesses by assisting business owners to reflect on their business plan and strategies.

Keywords: Malaysia, coronavirus, lockdown, COVID-19 outbreak affecting consumers, consumers perception

Introduction

The world economy contracted by 12% between January and March 2020 due to COVID-19 outbreak (World Economic Forum, 2020). Due to this crisis, every country, industry, business, individual, and all aspects of the global economy are directly, or indirectly negatively impacted by COVID-19. This pandemic brings negative impact to all parties, including businesses, consumers, and policymakers as the uncertainty and how far the COVID-19 chain would stop. Moreover, during a global recession situation nowadays, supply chains are critical, and business owners need to liquidity their assets to support families and staff and to secure cash flows (Fernandes, 2020). These factors may change the business strategies to sustain in business. Nevertheless, consumers' perception can give a view on the negative impact of this pandemic on business or products based on consumer point of view, and it is vital to help business owners to improve the products or to venture to a new industry.

Instead of negative impact, COVID-19 also has a positive impact on all parties including, hospitality, business, and individuals. According to Charles (2020)in his article entitled 'the good thing about coronavirus', discussesthe positive impact of this pandemic. First, the hospital in China has built-in ten days due to situated the massive positive COVID-19. Second, some countries such as Japan take an opportunity by starting buy shares from the countries which are still in the crisis. Japanese Banks has monitored the financial market and buys the stock at the lowest price for the potential sustainable company after the chain of COVID-19 stop. Third, in Malaysia, our Health director-general namely Datuk Dr Noor Hisham Abdullah has been named by a Chinese TV stationas among the "top doctors" in the world for his approach in handling the Covid-19 pandemic(Rahim, 2020). This recognition is preciousgiven by the world to Malaysia. However, there are little studies focused on the positive impact of the spread of COVID-19 all over the world.Therefore, this study also looks into the positive impact of COVID-19 transmission to businesses based on consumers' perception.

Consumer's perception can be the customer opinion of products in statistic ways based on their direct or indirect experience on phenomena. Therefore, the study aims to identify the consumers' perception of the impact of COVID-19 transmission on businesses in Malaysia. Four sections will be discus in this paper: (1) the negative impact to businesses in Malaysia; (2) the positive impact to businesses in Malaysia; (3) the methodology to design the study for data collection and data analysis; (4) the findings and statistics of the negative and positive impact of COVID-19 transmission on businesses in Malaysia; and (5) the implications and limitations of research in this study.

Consumers Perception of the impact of COVID-19 transmission on businesses

Available literature found that there are negative impact of COVID-19 transmission on business all over the world, including developed and developing countries. A studying China in the tourism industry revealed the flight tickets canceled as tourists are not allowed for domestic travel (Hoque, Shikha, Hasanat, & Arif, 2020). They also claim that the revenue has declined as no individuals are traveling to China, and the Chinese are not allowing to go overseas. They further reveal that the pandemic virus enables the tourism industry to face a tremendous threat as well as the economic slowdown because this situation would impact the sales and the current achievements. These findings also similar to the US and Spain as (McKibbin & Fernando, 2020; Wren-Lewis, 2020; Yue et al., 2020) found that one of the impacts of COVID-19 is they need to shut down their operation due to lack of purchase from consumers in their shop, leading to a decline of profit. All of the above studies are in developed countries. For developing countries such as Sri Lanka, also no exception as the study by Ranasinghe et al. (2020)found that the tourism industry is facing a tough time due toCOVID-19 affecting the country. Thus, it manifested that the tour agencies are stopping their activities to prohibiting the spreading of this pandemic.

Previous studies found that there are positive impact of COVID-19 transmission on business all over the world such as Canada, U.S, Europe, China, Philippines.For example, a study in Canada found COVID-19 increased the revenue of the food and beverage industry as it needed during the pandemic(Baker, Farrokhnia, Meyer, Pagel, & Yannelis, 2020).Baker, Farrokhnia, Meyer, Pagel, and Yannelis (2020)also reveal that consumers spendon home goods,especially groceries,is increased by approximately 50%. Another study in Canada to explore the potential effects of the COVID-19 pandemic on Canadian food processors. This study claims,the impact of COVID-19 on food processing may depend on the type of products and the size of the processors(Hailu, 2020). The changes in consumption patterns away from the food-service industry to meals prepared and consumed at home (Hobbs, 2020). In pharmaceuticals in China, the study revealed that consumer spending increased in pharmacies, which remained open throughout the shutdown (Chen, Qian, & Wen, 2020). This situation also similar in Pakistan as the brand health buying increased (Greenspan, 2012). In the fuel industry, the Department of Statistics Malaysia [DOSM] (2020)found that the usage of fuel decreased. Similar studiesin the U.S that used transaction-level bank account data in Danish bank uncovered that the spending on fuel and commuting decreased even though gas stations remained open because customers did not have a place to go since the shopping malls and firms closed(Eichenbaum, Rebelo, & Trabandt, 2020). For safety and hygiene products, a study in China revealed that the demand for hygiene paper products is closely related to people's growing awareness of safety and hygiene. Under the pandemic situation of COVID-19, demand for disposable paper towels, disinfectant wipes, face masks, disposal paper underwear, and other related hygiene products is rising rapidly (Liu et al., 2020).

Method

A quantitative methodology was utilized to this study to identify the consumers' perception of the impact of COVID-19 transmission on businesses in Malaysia. Theself-administered questionnairedistributedto all consumer in Malaysia through social media, and an online survey systemused as a method of data collection. According to the Department of Statistic Malaysia (2016), the population of this research is more than one million Malaysian citizens. Therefore, based on Morgan table, the researchers have decided to take the sample of 450 (Morgan, 2012). For the descriptive data analysis, the Statistical Package for the Social Sciences (SPSS) version 21. used to derive the frequency, percentage, and to identify the consumers' perception of the impact of the COVID-19 transmission on businesses in Malaysia.

Findings

Total of 400 self-administered questionnaires collected by an online survey system from consumers. The questions covered the spread of COVID-19 affecting the business in Malaysia based on consumers' point of view. Based on categories identified in the purpose of the study, the data relating to the negative and positive impact of COVID-19 transmission on businesses in Malaysia analysed, as shown in Figure 1 to 10. The following section will discuss the negative and positive impact of the phenomena**.**

Table 1. Sample Table

Variables	Frequency	Total
Xxxx	10	10
Yyyy	10	10

Negative impact of COVID-19 transmission on business in Malaysia

This section discusses data in charts on the negative impact of the spread of COVID-19 on businesses in Malaysia. There are four charts to narrate the phenomena of the study: 1) Figure 1, snack and drink industry; 2) Figure 2, telecommunication; 3) Figure 3, street foods; and 4) Figure 4, tourism industry.

The spread of COVID-19 has a positive impact and boost-up profit for snacks and drinks

This study found that there is no positive impact of the spread of COVID-19 on snacks and drinks sector during the COVID-19 pandemic on businesses. The consumers' perception disagreed that the COVID-19 would boost-up the snacks and drinks industry, which is 23.3%, approximately 89 respondents as in Figure 1. This finding is similar to DOSM (2020)found the consumers spending decreasedto 35% on alcohol and snacks as comparing before and during COVID-19 outbreak.

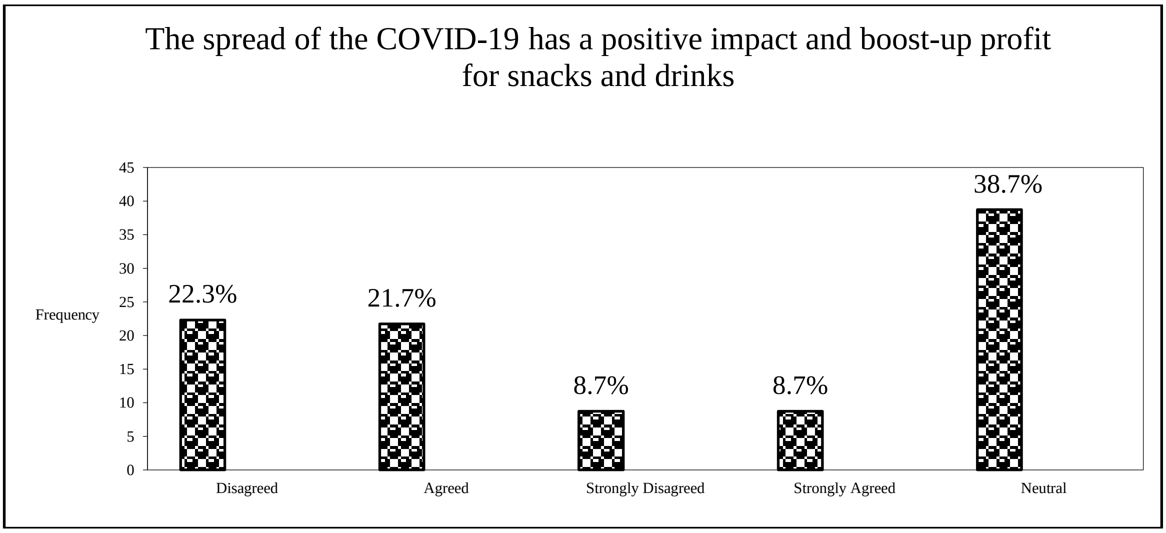

Figure 1. Snack and Drink industry

The spread of COVID-19 has a positive impact and boost-up profit for telecommunications

This study found that there is no positive impact of the spread of COVID-19 on telecommunication sector during the COVID-19 pandemic on businesses. The consumers' perception disagreed that the COVID-19 would boost-up the snacks and drinks industry, which is 25.3%, approximately 101 respondents, as shown in Figure 2. This finding is similar to DOSM (2020)found this sector is not affected as the consumers spending still maintain or no changes (0%), comparing before and during COVID-19 outbreak.

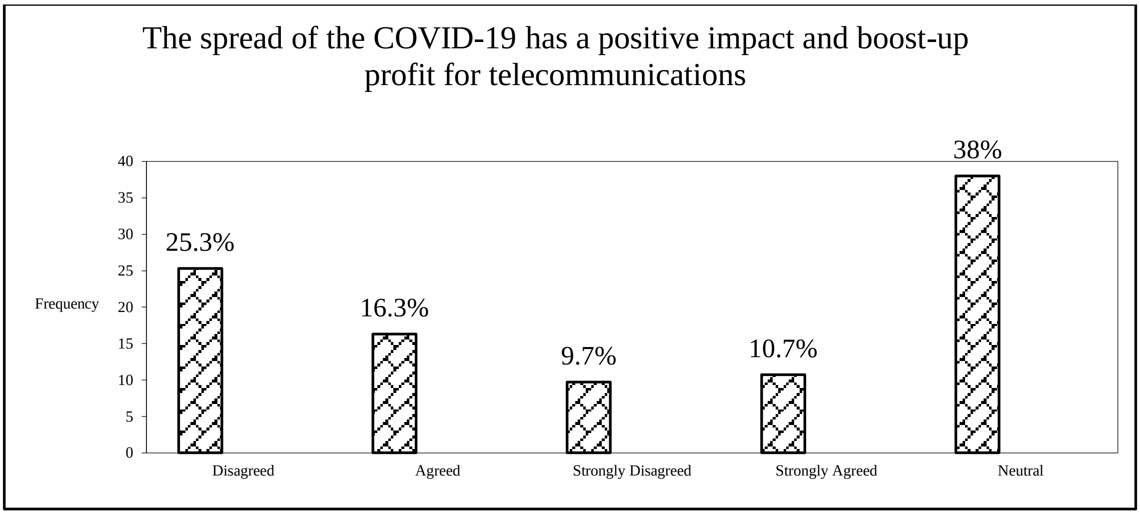

Figure 2. Telecommunication

The spread of COVID-19 has a positive impact and boost-up profit for street foods

This study found that there is no positive impact of the spread of COVID-19 on street foods sector during the COVID-19 pandemic on businesses. Figure 3 indicates that the consumers' perception disagreed that the COVID-19 would boost-up the street foods, which is 25.3%, approximately 101 respondents.

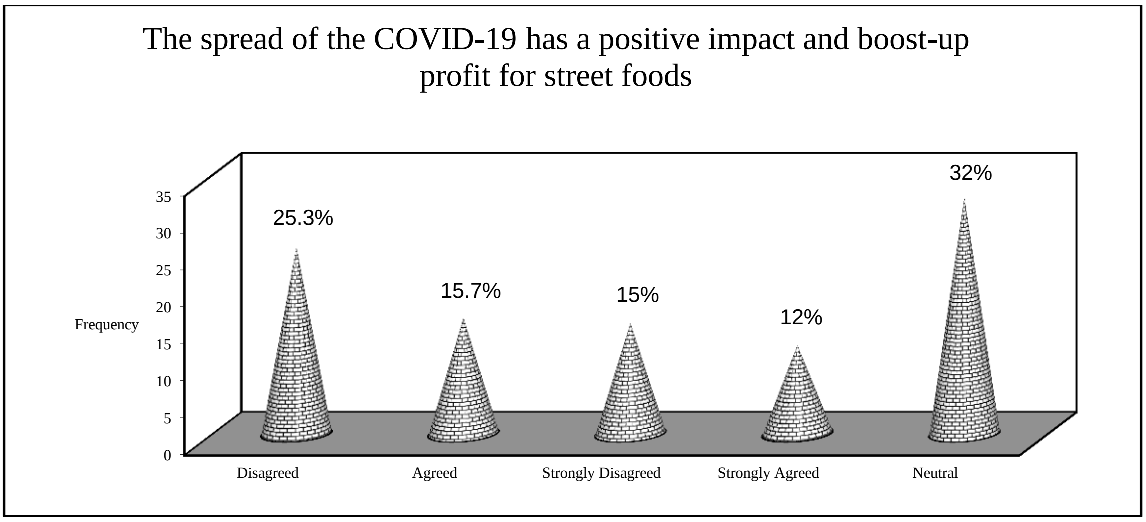

Figure 3. Street foods

The spread of COVID-19 has a positive impact and boost-up profit for tourism

This study found that there is no positive impact of the spread of COVID-19 on snacks and drinks sector during the COVID-19 pandemic on businesses. The consumers' perception strongly disagreed that the COVID-19 would boost-up the snacks and drinks industry, which is 36.3%, approximately 145 respondents in Figure 4. This finding is similar to DOSM (2020)found the consumers spending decreased to 89% on travel agency as comparing before and during COVID-19 outbreak. The rapid spread of the COVID-19 in Malaysia has stopped the routine life of the people in Malaysia. This fear has impacted the tourism industry of the country domestically and internationally. This finding is supported by Hoque et al. (2020), who conducted a study in China that focuses on the tourism industry revealed all flight tickets cancelled as tourists are not allowed for domestic travel, and the Chinese also are not allowing to fly abroad. This finding similar to the US and Sri Lanka revealed that one of the impacts of COVID-19 is they need to shut down their operation due to lack of purchase from consumers in their shop, leading to declined of profit(McKibbin & Fernando, 2020; Ranasinghe et al., 2020; Wren-Lewis, 2020; Yue et al., 2020).

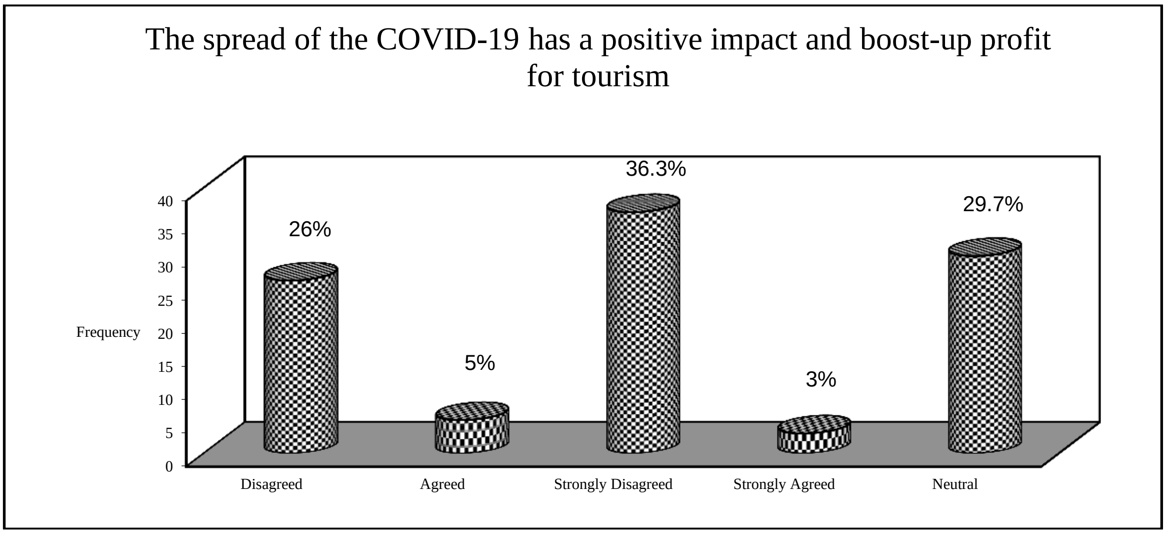

Figure 4. Tourism industry

Positive impact of COVID-19 transmission on business in Malaysia

This section discusses data in charts on the positive impact of the spread of COVID-19 on businesses in Malaysia. There are six charts to narrate the phenomena of the study: 1) Figure 5, food and beverage industry; 2) Figure 6, supermarket; 3) Figure 7, pharmacy and health product; 4) Figure 8, petrol and diesel; 5) Figure 9, wet market; and 6) Figure 10, personal hygiene industry.

The spread of COVID-19 has a positive impact and boost-up profit for foods and beverages

Figure 5 has indicated the 24% approximately 96 respondents agreed with the spread of the COVID-19. Thus, the finding of this study has a positive impact that boost-up profit for foods and beverages as people tend to cook at home rather than eat at the restaurants. Consumers are cooking at home as a response to the fear of infection.This finding is similar to the study conducted by Baker, Farrokhnia, Meyer, Pagel, and Yannelis (2020), which reveals spending is increased by approximately 50% for home goods, especially for groceries.This finding also consistent with a study in Canadaclaimed that food processing might depend on the type of products and the size of the processors, and most of the consumption patterns are from the food-service industry to meals prepared and consumed at home(Hailu, 2020; Hobbs, 2020).

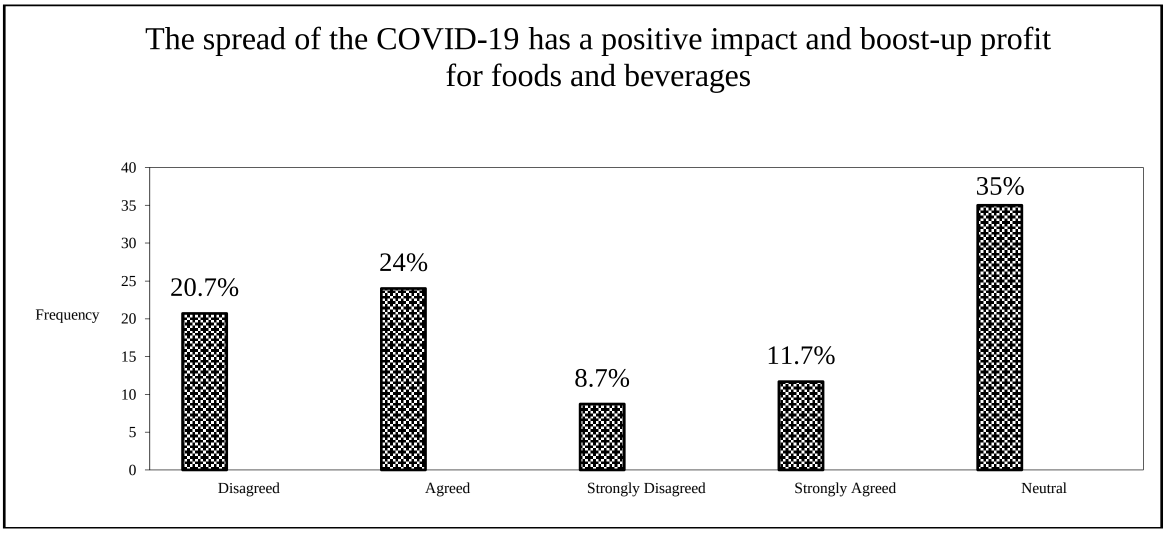

Figure 5. Food and beverage industry

The spread of COVID-19 has a positive impact and boost-up profit for supermarkets

The findings found a positive impact of the spread of COVID-19 on supermarket during the COVID-19 pandemic on businesses. Figure 6, consumersare strongly agreed that the COVID-19 would boost-up the supermarket, which is 43.3%, approximately 173 respondents. The supermarket they went to are GIANT, TESCO, ECONSAVE and AEON. The findings revealed five reasons to spend money at these supermarkets: (1) easy to find almost every type of products for daily needs; (2) the price is cheap; (3)one-stop-center; (4) less crowded; (5)wide area and easy to practice ‘social distancing’.This finding is similar to DOSM (2020)found this sector is not affected as the consumers spending is increasing to 27% comparing before and during COVID-19 outbreak.

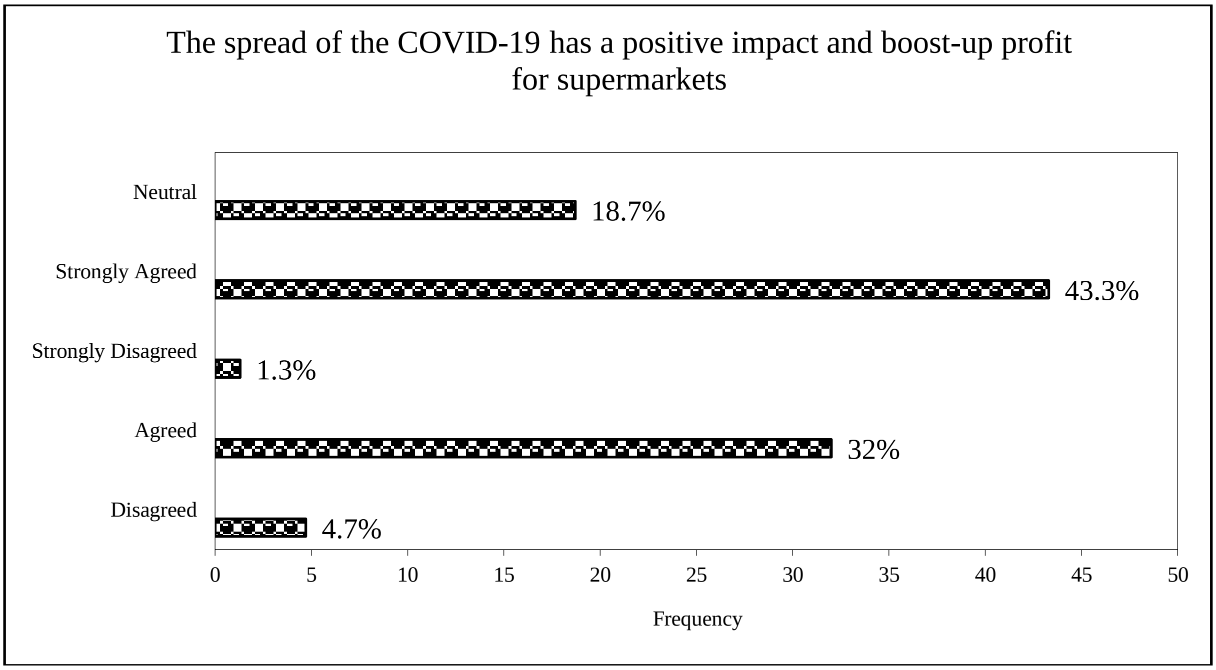

Figure 6. Supermarket

The spread of COVID-19 has a positive impact and boost-up profit for pharmacies and health product

The findings found a positive impact of the spread of COVID-19 on pharmacy and health product during the COVID-19 pandemic on businesses. Consumers strongly agreed that the COVID-19 would boost-up this industry, which is 58.3%, approximately 233 respondents in Figure 7. This study consistent with the previous studiesin China and Canada revealed the consumer spending increased in pharmacies and brand health, which remained open throughout the shutdown(Chen et al., 2020; Greenspan, 2012).

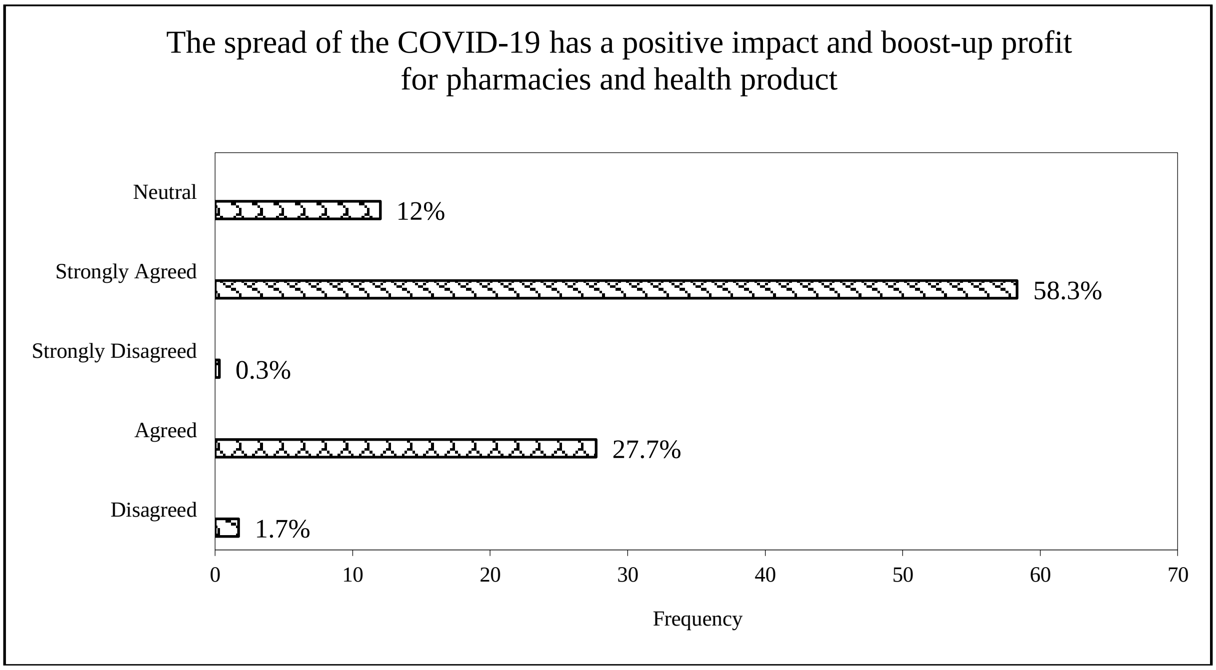

Figure 7. Pharmacy and health product

The spread of COVID-19 has a positive impact and boost-up profit for petrol and diesel

The findings found a positive impact of the spread of COVID-19 on the petrol and diesal during the COVID-19 pandemic on businesses. Figure 8, consumers are agreed that the COVID-19 would boost-up this sector,which is 22%, approximately 88 respondents. However, this finding is contra with DOSM (2020)found this sector isaffected as the consumers spending is decreasing to 58% comparing before and during COVID-19 outbreak. This study also not consistent with a study in the U.S that used transaction-level bank account data in Danish bank uncovered that the consumers' spending on fuel and commuting decreased even though gas stations remained open because customers did not have a place to go since the shopping malls and firms were closed(Eichenbaum et al., 2020).

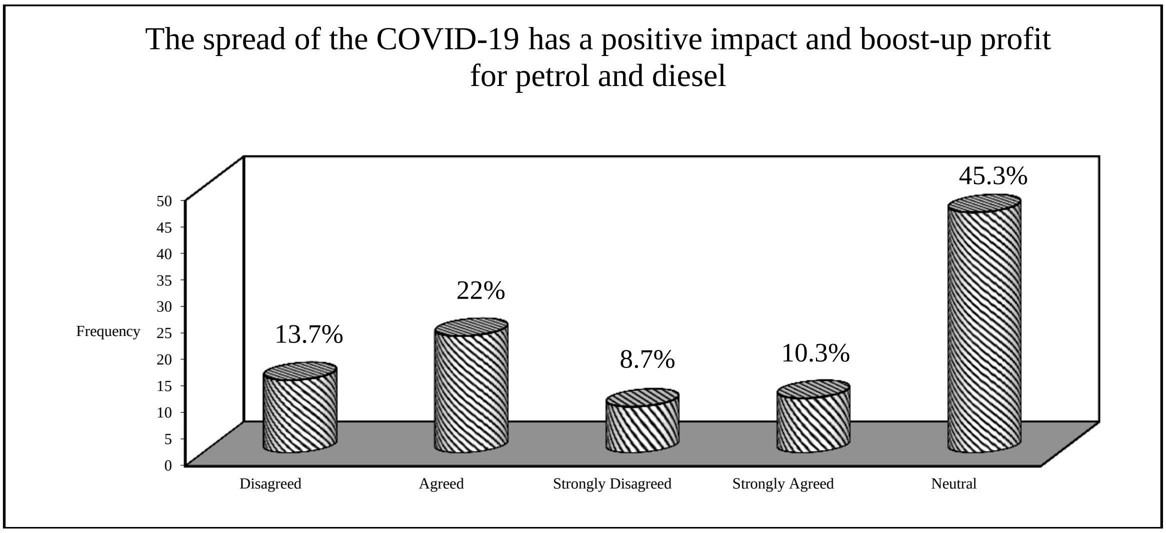

Figure 8. Petrol and diesel

The spread of COVID-19 has a positive impact and boost-up profit for wet market

The findings found a positive impact on the spread of COVID-19 on the wet market during the COVID-19 pandemic on businesses. Figure 9, consumers are strongly agreed that the COVID-19 would boost-up the wet market, which is 36.3%, approximately 145 respondents. This finding is similar to DOSM (2020)found this sector is not affected as the consumers spending increased to 27% comparing before and during COVID-19 outbreak. Another study in Canada also supported this finding asdue to the closure of restaurants, bars, and schools, produce growers and distributors forced to shift supplies almost entirely from the food-service to the retail channel. Shippers reported labor and logistical constraints in making the change, but the fresh produce supply chain remained robust(Richards & Rickard, 2020).

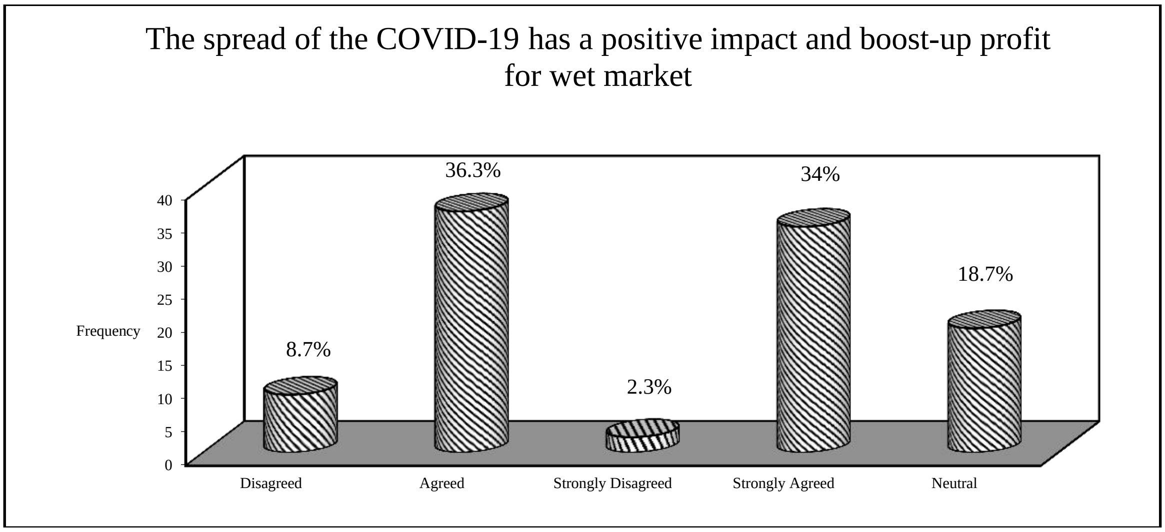

Figure 9. Wet market

The spread of COVID-19 has a positive impact and boost-up profit for personal hygiene products

The findings found a positive impact on the spread of COVID-19 on personal hygiene products during the COVID-19 pandemic on businesses. Figure 10, consumers are strongly agreed that the COVID-19 would boost-up the products, which is 70.7%, approximately 283 respondents. This study supported by Liu et al. (2020), claimed the demand for hygiene products such as disposable paper towels, disinfectant wipes, face masks, and disposal paper underwear is closely related to people's growing awareness of safety and hygiene.

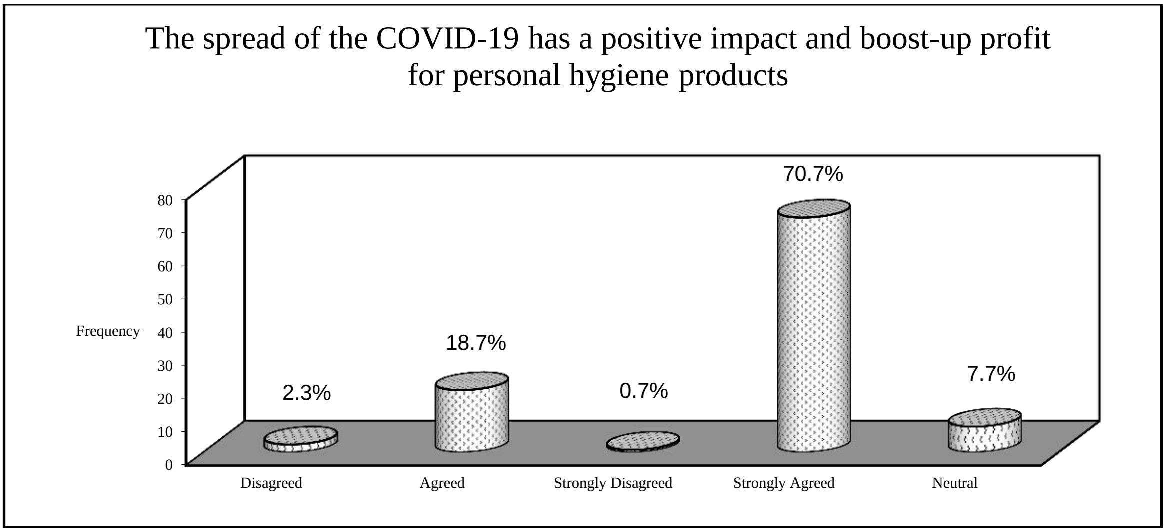

Figure 10. Personal hygiene industry

Conclusions and Recommendations

Consumers perception summarized as to customers feeling about products or services based direct or indirect experience they have had. By monitoring customer perception, business owners can spot user necessity and improve customer satisfaction. Based on consumers perception, there is a more positive compared to a negative on the impact of COVID-19 transmission to businesses in Malaysia. Six positive impacts are (1) food and beverage industry; (2) supermarket; (3) pharmacy and health product; (4) petrol and diesel; (5) wet market; and (6) personal hygiene industry. Four negative impacts include (1) snack and drink industry; (2) telecommunication; (3) street foods; and (4) the tourism industry. COVID-19 is jeopardizing all industry, especially business either in negative or positive ways. This pandemic remains uncertain, some business gets a benefit, and some went to the worst case. Thus, all of us should ready with whatever scenario, either worst or best in the future.

Based on the findings, the business owners can reflect the impact of COVID-19 their company, then strategize the business plan. These findings also can help the business stakeholders to predict the most affecting factors and find innovative and effective solutions before the economic depression become unavoidable. Thus, it would help the policymakers to understand what kind of support they should plan with their community as well as key personnel to make it possible for the business to operate during pandemic either in physical stores or online stores. Moreover, these findings can help policy maker’s continual revision and refinement of current practices for business owners in the future. It is hoped this study can be a guideline to choose which strategies should be number one focused, might be in providing training for the online store. Besides, this guideline able to help the ministry as well as policymakers to ensure all businesses sustain in business no matter how long the pandemic occurred.

There are several limitations to this study. First, the survey is conducting via an online survey system among business owners in Malaysia. Therefore, data collection procedures are likely to be a constraint that influenced the outcome of the study. However, the online survey system is the best mechanism during the pandemic and comply with government instruction to ‘stay at home’ and practice ‘social distancing’. Second, snowball sampling is using as the sample selection method for business owners who involve in businesses, but it is not a convincing technique to select the sample that represents the selected population and meets the sampling criteria.

However, this is an appropriate technique to reach large respondents with limited movement and time. Third, this study was limited to sample size and sample space. However, the accuracy of the results is highly dependent on the sincerity, openness, and cooperation of the respondents. Fourth, the respondents are refuse to answer a self-administrated questionnaire as the respondents' misinterpretation to the questions due to the absence of the interviewer. However, the self-administrated questionnaire is the best method during MCO as the researchers are not able to meet-up with the respondents.

Plagiarism Rate = 14%

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Motivation and Performance in Relation with the Influence of Irrational Beliefs on Online School Learning

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Abstract
Learning is a complex activity. Its results can be revealed in new acquisitions that increase the adaptability to the increasingly complex requirements of the environment. A general factor recognized as closely related to performance is motivation. Specifically, school motivation is associated with school performance, which can later be manifested in professional performance or in other fields of activity of the individual. What is the relationship between motivation and performance in exclusively online learning during the pandemic context and what influence do irrational cognitions have on adapting to the new school requirements? In the present study we aim to highlight the relationship between intrinsic motivation and academic performance in the online environment, during the pandemic. This relationship is analysed in the context of studying the impact of irrational beliefs on the relationship between motivation and performance. A number of 84 students and Masters degree students were enrolled in the study during the lockdown period and were evaluated in two stages: in April and May, the period without exams, but with learning exclusively online and one week before the start of the exam period. The results indicate that despite the effort mobilization and the interest or pleasure in academic activity, given that the level of irrationality has not changed, students show decreased perception of competence for the upcoming exams ($p>.36$). The exclusively online learning can be approached both as a cause and as an effect of the decrease in the perception of competence in academic exam tasks. Further research is needed to clarify this issue.
Keywords: Intrinsic school motivation, school performance, irrational beliefs, online school learning

Introduction

The Covid-19 pandemic has generated important lifestyle changes for each of us. One of the regulations required in the pandemic context was that regarding the continuation of teaching in the online environment. Despite the fact that the virtual environment is used in the educational process, we have less information about its unilateral and total character. The impact of using exclusively the virtual methodology in the learning process for a longer period of time in conditions of self-isolation, social distancing imposed between teachers and students, socio-medical distress and limitation of individual freedom is not yet known.

In such conditions, we are interested in studying the relationship between motivation and school performance in the teaching-learning process using only the online environment. Motivation is known as the motive or driving force that sustains and maintains performance, contributing decisively to success (Tohidi & Jabbari, 2012; Özen, 2017). From an academic point of view, motivation refers to the strength, desire, need of the student to be successful in the learning process (Schoen, 2014). Motivation thus plays an overwhelming role in school learning (Diseth & Kobbeltvedt, 2010). The same authors claim that school motivation is manifested both in the learning process, mediating performance, and as a modeller of the attitude that the student adopts towards the object of study. Self-regulation of motivation can be defined as the activities which the person initiates or maintains intentionally, their own willingness to initiate, approximate or complete a certain activity or a certain goal (Kathryn, Fletcher, Neumeister, 2012).

According to Pintrich (Pintrich, 2003), study motivation becomes a very important concept in that it is encompassed in the idea of achievement motivation. Thus, learning enrols the student in the race for self-realisation, its efficacy correlating with success in terms of achieving major goals in life. The desire for performance, but also the fear of failure are two conditions that must be taken into account when studying the relationship between motivation and performance (Achakul &Yolles, 2013). The two constructs can lead to individual dynamization and cognitive and metacognitive activation, in diametrically opposite directions: thus, the motivation for achievement / desire for performance are associated with efficient cognitive self-regulation, and the fear of failure is correlated with negative self-regulation (Schoen, 2014).

From the point of view of the source, motivation can be classified into two main categories: intrinsic motivation and extrinsic motivation. Intrinsic motivation refers to those actions that the individual undertakes and successfully completes due to inner values and motives that support and regulate behaviour. Extrinsic motivation involves relating the performance of individuals to factors that are outside them, which are in connection either to a particular context, circumstance or with the particularities of the activity or object that is involved in individual activity (Achakul &Yolles, 2013). Academic success has been correlated to better rates with intrinsic academic motivation. Intrinsic motivation implies a certain level of psycho-emotional maturity and maturity in terms of self-regulation of behaviour, so that it can be manifested in older school age, but also with a certain level of emotional stability (Roman, 2011).

But motivation is influenced by one's own cognitions or judgments (Ozer & Akguna, 2015). Thus, our own states or the reality that surrounds us can be analysed at several levels (Roman, 2011). The first of these refers to the description of reality (descriptive cognitions), where the result of our perceptions is presented without adding other information (e.g.: 'they did not attend the meeting'). The second level refers to inferences which go beyond the data specific to the senses, where emotions and, partially, thoughts with evaluative content are involved (e.g.: 'they did not participate in the meeting because they do not like me'). A third level of analysis refers to evaluations and includes the judgments that a person makes (e.g.: 'they did not attend the meeting because they do not like me and this is a catastrophe for me') (Dryden, 2001). The assessments we make can be rational or irrational (Wallen, DiGiuseppe & Dryden, 1992). Rational cognitions benefit from logical, empirical and pragmatic support and lead to adaptive emotions and behaviours; irrational ones are not supported logically, empirically or pragmatically and lead to maladaptive / dysfunctional emotions and behaviours (DiLorenzo, David & Montgomeri, 2007). Dryden (2001) mentions that these irrational judgments are factors that underlie psychopathology and that they are an essential substrate of emotional and behavioural problems. When negative life events occur, which generally trigger negative emotional responses, their intensity and quality is cognitively regulated. The answer to difficult life situations can be adjusted by changing the thoughts in connection to the problem that appeared (DiLorenzo, David & Montgomeri, 2007).

Turner & Davis (2018) argue that irrational beliefs can influence motivation and behavioural self-determination and we are interested here in how self-motivation, in the absence of the extrinsic motivational factor (teacher), is related to rationality and irrationality. The present study aims to investigate the efficacy of learning in a pandemic context, following the relationship between the irrational beliefs and the motivation that students had in the process of studying and preparing for exams during the period when academic education was conducted exclusively online.

Method

The methodology of the study is a survey method research defines student's beliefs about online education.

Participants

The number of study participants was (N=84) students in undergraduate and Master's programmes at different specializations. The average age for male students is m=22.32 (s.d. 3.88); the number of male students is (n=29). The rest of the students are female (n=55) with an average age m=22.51 (s.d.= 4.97). Sixty-six students are from urban areas, while 18 students come from rural areas.

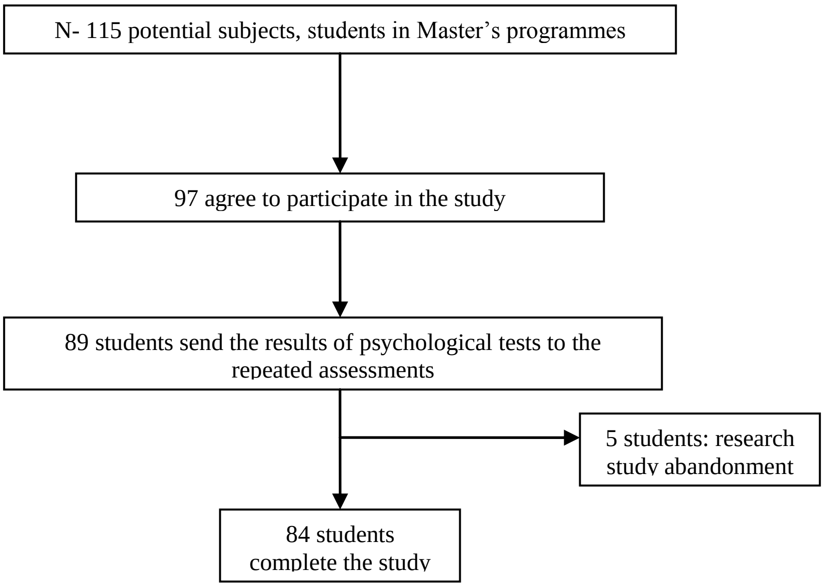

Figure 1. Subject selection diagram

As can be seen in the diagram above, out of 115 potential subjects, heterogeneous in terms of age, year of study and specialisation, 84 students sent the results of repeated tests, thus completing the study. While 5 students formed the study abandonment group, 18 students did not express their willingness to participate in the study, and 8 Master’s students did not give any answer to the proposed tests. This constitutes a sample with 84 participants.

Procedure

The participants were informed on the purpose of the study and its implications at a personal level and at the academic and practical level of the research, and signed the informed consent form. Being a procedure that involves repeated measurements, the subjects were informed about this fact, clarifying that none of the stages of the evaluation has anything to do with the previous ones or with the subsequent ones. Students were advised to answer according to how they think or feel at the time of testing. The tests were conducted online, during the self-isolation period, in April and June 2020. It is important to note that the academic examination period of the students is carried out in June. During the self-isolation period, the academic courses and students’ studying were done exclusively online. The students were asked to provide their answers having in mind the educational tasks required during the period of self-isolation and the teaching and learning activities that each one carries out.

Instruments

In order to achieve the objectives of this study we used two scales that investigated specific aspects pursued by us. Thus, in order to identify the motivation of Master’s students, we used an intrinsic motivation scale, the Intrinsic Motivation Inventory (IMI) (Deci et al, 1994). This is a multidimensional tool that measures participants' subjective experiences in relation to a particular task. The scale contains 23 statements grouped into four subscales: Interest/Enjoyment (7), Perceived Competence (6), Effort/Value (5) and Pressure/Tension (5). Items are rated on a scale from 1 (‘Not at all true’) to 7 (‘Very true’). Some items are rated directly, others vice versa.

For testing the irrational cognitions, we used the short form of the attitudes and beliefs scale (ABS 2) (David, 2007; Dryden and DiGiuseppe, 1990), which measures individuals' tendencies to perform absolutist and rigid assessments of perceived events. The 4 measured irrational cognitions were: ‘must’, global assessment, catastrophe and low tolerance to frustration. The scale also measures rational cognitions, which are the rational variant of the irrational ones, as follows: preferences, nuanced assessment of the aversive character of an event, tolerance to frustration and unconditional acceptance of themselves and assessment of specific behaviours. The scale consists of 8 items. The scale has good validity and fidelity, the values of the Alpha coefficient being between .56 and .78.

Results

Table 1. The repeated-measures t-test and the significance threshold of the dependent variables

Type of variable	Test-t	p
Interest/Enjoyment	3.05	.005
Effort/Value	2.06	.042
Perceived Competence	*.91*	*.364*
Pressure/Tension	2.00	.048

Regarding the answers to the interest/enjoyment subscale, related to the academic activity, there are significant differences between pre-test (term period) and post-test (exam period). The interest increased as the end of term exams were approaching, fact indicated by the averages of differences m=35.20 (s.d.=1.93) in pre-test, m=35.73 (s.d.=1.82) in post-test. The commitment in the academic task increases the Interest/Enjoyment for the respective activity.

The effort/value associated with the academic task changes significantly from pre-test to post-test, the average of the differences indicating an increase during the exam period as follows: m=15.40 (s.d.=2.73) during the semester and m=15.95 (s.d.=2.79) in the exam period, when students were preparing for the exams.

The perception of competence did not change significantly from the pre-test to the post-test stage, but facing the preparation for the exams led to a decrease in the perceived competence when students got involved in the task. The averages indicate m=34.83 (s.d. 2.46) during the term, m=34.72 (s.d.= 2.25) during the exam period. Related to the qualitative interpretation, i.e. the significance of the values above and below an average to which a standard deviation is added/subtracted (m±s.d.), there are very few values that are above the average range, most of them being below the range. Therefore, the perceived competence when dealing with a new academic task through which the student is evaluated, is low in online learning. This can be a disadvantage of this teaching/learning system.

The pressure/tension experienced changed significantly from the pre-test stage to the post-test stage, as indicated in the above table. The averages indicate an increase in the value of the pressure/tension felt during the term m=18.70 (s.d.=2.51) to the value during the exam period when m=19.36 (s.d.=3.09). Commitment to the learning task for exams leads to increased pressure/tension.

Regarding the variable considered to be moderating the dependent variables, according to the cognitive theories underlying the cognitive-behavioural therapies, irrationality is the determining factor of distress and dysfunction, and not the activating events, i.e. the exams or the academic tasks. Thus, the level of irrationality measured with the help of the ABS scale (short form) did not change significantly from the pre-test stage to the post-test stage (t=1.08, p>.28). The averages support this reality: pre-test average=24.16 (s.d.=2.81), post-test average m=24.27 (s.d.=2.62).

Conclusions and Recommendations

In the present study we aimed to highlight aspects of the efficacy of virtual learning established due to the isolation and social distancing imposed by the Covid-19 pandemic. We considered this fact by taking into account the motivation of students during the pandemic. The question we posed was whether the efficacy of learning is optimal during the period of isolation of students and whether the educational-instructional process is efficient in the virtual environment. We are interested in how irrational cognitions influence the motivation of Master's students for learning and whether there is a certain relationship between the two variables.

The motivational factor is responsible for the success in an activity, but the results obtained by us do not fully or unilaterally support this. Thus, although the interest/enjoyment and effort/value involved in learning tasks during the term increased together with the commitment to academic learning, when students faced the exam preparation, their perceived competence related to a learning task did not increase. Despite the mobilization of cognitive and motivational-affective resources, the proven efficacy in competencies to perform academic tasks does not have a positive development. The level of irrationality, which could be a causal factor of cognitive-behavioural changes, did not change during the exam period compared to the term period. Although irrationality is a direct causative factor of failure, because its intensity has not changed with the commitment to evaluative tasks or tasks involving more intense distress, it cannot be incriminated as having a unilateral role in the decreased self-perception of competence towards academic tasks.

An analysis of the results obtained allows us to advance some explanations related to these results. We will structure these discussions and conclusions as follows: from the perspective of the teacher, from the perspective of the learning subject (student) and from the perspective of the learning context.

Thus, from the point of view of skills formation, the model and modelling play an important role. In the virtual environment, the model is partially accessible and probably insufficient in relation to the number of repetitions needed to form skills. Modelling is much reduced or even absent in virtual learning, some ready-made virtual models taking the place of modelling. The more diversified the direct interaction of the individual with the academic task, the more efficient its learning and memorisation will be. From the perspective of maintaining attention in a less structured task, an important role belongs to the teacher who focuses the attention on critical points or key aspects that are more difficult to learn or imitate. In the absence of teachers, these aspects were less present in the learning process, each student participating independently with the attentional resources probably distributed in a less functional manner. From the perspective of mediation, the teacher's role is to facilitate an educational content, to process it so that it becomes compatible with the particularities of the subject of mediation. Insufficient mediation or a virtual model of mediation must focus more on the psycho-individual peculiarities of the subjects involved in learning tasks.

The emotional context of the study, distress and fear of illness, spending a lot of time in the same environment interacting only with family members, reduced possibilities to self-organise activities associated with age, lack of previous experience and less formal learning cannot be neglected.

When it comes to the learning context, it underwent the most drastic changes during the pandemic, by moving online. Thus, the laboratory, the sports field, the audition room, the resource room were replaced by virtual models, less accessible to all the sense organs, only certain parts of the brain being stimulated, while others remained under-stimulated. The interaction of the individual with the practical learning experience is therefore very limited.

The present study presents limitations related to the small number of participants and the reduced complexity of the research design. The research brings new and relevant information about the efficacy of academic learning in a pandemic context, emphasizing the importance of direct interaction between the teacher and the learning subject. In order to increase the quality of the academic activities, the importance of teacher-student interaction should be corroborated with the complexity of the resources available in the virtual environment.

Plagiarism Rate=4%

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The Impact of the Circumstantial Distress Correlated with Situational Distress in Exams Performance

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Abstract
With the installation of the Covid 19 pandemic, the life of each of us has taken on a different horizon. The rhythm of the individual, professional, educational, social, recreational-occupational activities was suddenly interrupted, without being able to make clear predictions about what will happen next. But what happens when on a stressful circumstantial background overlap new challenges (situational stressors) with a strong personal significance (which implies a strong personal stake)? Is the chronological age also a factor of vulnerability due to its intrinsic particularities? We all know that during the pandemic, the elderly are a vulnerable category, but we have less information about pubescents, adolescents and young people. In the present study we aim to highlight the stressful impact of the graduation exams of an educational cycle on three age categories: pubescents, respectively middle school graduates, adolescents, high school graduates and college students in the first year of study. We aim to highlight the connection between the irrational cognitions and distress during the preparation period for the graduation exams of some school cycles. We study this relationship in the context of the pandemic, a context characterized by circumstantial stress, over which a situational stressor, the graduation exam, overlaps. A number of 156 participants participated in the study, conducted online. The results indicate an increase in the intensity of stress with the anticipation of exams, despite high levels of distress given by the context of the pandemic. Exam performance was correlated with the irrationality and distress, obtaining significant negative correlations (p=.00).
Keywords: School circumstantial and situational stress, irrational cognitions, exams, school performance.

Introduction

The adolescent stage is marked by profound socio-affective, cognitive and behavioral changes, which impacts the psychological functioning of the individual. Adolescence is known as a period of socio-affective and decision-making instability. This fact is mainly due to insufficient life experience, a lifestyle characterized by challenges that the adolescent failed to adapt to, the models that each of us chooses at some point, but also the desire to overcome self in the ascendence towards self-achievement. All these can have as a substrate the mechanism of the cognitive discrepancy, which must be investigated whenever we face the problems of adolescent distress. These are just some of the factors that are specific to the adolescence and that may at some point influence the school performance.

On the other hand, the authors evaluate the adolescent stage as a propitious period to adaptation to novelty and of successful life events (Jaworska & MacQueen, 2015). The challenges to which the adolescent is exposed involve an alert process of adaptation and problem solving, which is associated with an increased level of adaptability.

The problem is to clarify the way in which adolescence is conceptualized, through the prism of various perspectives on the adaptability of adolescents to the problems they face. In addition, we want to identify whether the academic stress is a self-stress or a distress in the context of the pandemic, given on the one hand the epidemiological context, over which is associated an important stressor, namely a form of school examination, on the other hand.

It is well known that exams are a stable source of distress for most who go through them (Jaworska & MacQueen, 2015). However, although Selye (Selye, 1956) considers that a certain level of distress is functional, adaptive and healthy, the prolonged nature and increased intensity of the stress can lead to low or even negative performance of pupils and students. Stress is associated by students with low-performing not only in terms of learning outcomes, but also during learning. Stress negatively influences the well-being of pupils and students, leading, not infrequently, to psychopathology, in which the idea of suicide is prevalent (Jaworska & MacQueen, 2015; Banks & Smith, 2015).

Chronic social isolation determined in rats depressive and anxious behavior (Rosiek et al, 2016). Although stress is also associated with the affective pathology such as depression, the hypothesis of a stressful life events is not supported as a one-way cause in the production of depression (Grant et al, 2016).

At the same time, studies on animals have identified an increase in breast tumors of the isolated pairs of animals, which is a risk factor for the appearance and malignancy of the breast cancer (Hermes et al, 2009). The same authors believe that an increase in corticoids hormones (corticosterone) in response to the acute stressors, as well as the low levels of estrogen and progesterone (in the circumstances in which the receptor status remained unchanged) were associated with a low cure rate (Adzic, 2009).

Regarding the association between the cardiovascular diseases and stress (Bunker et al, 2003), the authors consider that there is no obvious association between long-term negative life events, stressors at work, type A behavior, hostility, anxiety and cardiovascular diseases. However, other authors have identified in longitudinal meta-analytical studies that the deficits in socialization are associated with an increased risk of cardiovascular diseases (Nicole et al, 2015). Most authors believe that the prolonged cumulative stress can lead to cardiovascular morbidity, although not all studies can demonstrate this relationship (Waaktaar et al, 2004).

The irrational cognitions. In terms of cognitive-behavioral theories, the informational cognitions and processing are the determining factor of the emotional and behavioral reactions and not the experienced life events (Roman, 2011). Thus, we want to highlight the way in which the cognitions associated with the period of self-isolation and with the concomitant exams influence the behavior and emotions of the pupils/students in the period of the final evaluations. So we are interested in how certain irrational beliefs that are proven to be directly related to the malfunctioning influence the behavior and emotional states of adolescents during the graduation exams.

The self-isolation imposed by the pandemic context implies the transfer of the social relationships and the educational process in the online environment. Is it productive for learning or just an imposed solution that has no alternatives? Did the students fully use the period of self-isolation for adaptive purposes or did they experience the feeling of loneliness and/or lack of belonging? Starting from these objectives and unknown issues, we propose in the present study to investigate the way in which the graduates of the 8th, 12th and 1st year students at the college, who are in the process of evaluations, manage their stress and how it may be related to irrationality. By identifying these relations or causalities, the intervention measures to alleviate the distress generated by exams and the academic performances will be able to be improved. They will also be able to be more adequately adapted to the age specificity and the conjuncture associated with the exams.

Method

The study is correlational descriptive study about the effects on Circumstantial Distress to the Situational Distress in Exam Performance.

Participants and procedure

The participants in this study are people at the age of puberty (m gymnasium = 14.18, s.d.=.38) and adolescence (m high school=18.24, s.d.=.43, m college=19.30, s.d.=1.18) involved in an educational form, respectively gymnasium, high school and college. A number of 156 participants (N = 156) were informed through the informed consent on the implications of the research and received in the online version the scales to investigate their personal aspects related to the objectives of our study. For data analysis we used the SPSS program. In the first group (n=50), composed of middle school graduate students, there are 19 male participants and 31 female participants. In the second group (n=53), respectively high school graduates are a number of 20 male participants and a number of 33 female participants. In the group of high school level participants (n=53), we have 21 male participants and 32 female participants.

Instruments

The Levenstein „Perceived Stress Questionnaire" was developed by Levenstein and his collaborators (Baban, 1998). The scale captures the level of the self-perceived stress. The Irrationality Scale for Children and Adolescents (CASI) (Bernard & Cronan, 2007) measure intolerance to frustration given by rules, the global self-assessment, the absolutist demand for justice, intolerance to frustration given to work. It is administered to people between 10-18 years old.

Results

Regarding the total irrationality indicated by the test F (2, 150)=11.57, p=.00 we can say that between the three categories of participating subjects (middle school students, high school students and students) there are significant differences. Next, we proceeded to establish the differences according to the age group using the post-hoc procedures. Because the test for assessing the homogeneity of dispersions is not statistically significant and given that the number of subjects is approximately equal in each sample (N=53) we allow ourselves to use the Tukey post hoc test to compare the differences between the 3 samples in a post-hoc manner.

In terms of irrationality, post-hoc procedures indicate significant differences between the middle school and high school graduates (p>.04) and between the high school graduates and the 1st year students (p=.00), while between the other age categories comparatively used, were not identified statistically significant differences.

Regarding the irrational cognition "the absolutist requirement for justice", the test F (2, 150)=12.57, P=.00, indicates significant differences between the 3 samples. Thus, the post hoc procedures indicate significant differences between the middle school and high school graduates (p=.00) and between the middle school graduates and the 1st year college students. (P=.00). There are no statistically significant differences between the high school graduates and first year students (p>.97).

Low tolerance for frustration is a cognition we measure, both in terms of rules and its implications for work. We will first analyze the low tolerance for frustration in terms of rules. Thus F (2, 150)=15.35, p=.00 indicates significant differences in this cognition depending on the three experimental conditions. The post hoc procedures highlight these differences between the middle school graduates and high school graduates (p=.00), this relation not being found between the high school graduates and the students (p=.68). Significant differences were identified between the middle school graduates and students in terms of low tolerance to frustration given by rules (p=.00). Regarding the low tolerance to frustration given by work, F (2,150)=8.16, p=.00 indicates significant differences depending on the three modalities of the independent variable. Post-hoc procedures highlight these differences between the middle school graduates and high school graduates (p=.00) and between the middle school graduates and students (p=.00). No significant differences were identified between the high school graduates and students in terms of low tolerance to frustration given by work (p=.99).

The global evaluation was analyzed as distress-generating cognition, F (2, 150)=4.83, P=.00 indicating the existence of significant differences depending on the 3 modalities of the independent variable. Post-hoc procedures indicate significant differences only between the middle school and high school graduates (p=.00), the rest of the comparisons being statistically insignificant. We consider these variables as mediators of the emotional distress.

Emotional distress was measured one month after the state of emergency was imposed, when the general population was in self-isolation, the measurement being repeated a week before the start of the final aptitude exams, baccalaureate and the beginning of the session of exams for students. We are interested in a comparison of the level of distress given by the period of self-isolation (the circumstantial distress) and the situational distress given by the graduation exams of an educational cycle, which took place in an atypical manner, with many unknowns a priori anticipated. To identify these aspects we used the t test for repeated measurements.

Thus, in the case of middle school graduates, t=2.07, p.>.04, indicates significant differences between the distress during the isolation period and the one before the aptitude test (m self-isolation m=61.21, s.d.=18.18; m pre-examination m=64.32, s.d.=18.29). We notice that the averages of the results in the stress questionnaire increased in the period before the exam, the high levels of stress being recorded throughout the entire self-isolation period of time.

Regarding high school graduates, t=3.19, p.>00, indicates significant differences between the two periods under discussion. The averages analyzed m self-isolation=72.17, s.d.=19.72 and m pre-examination=75.21, s.d.=18.59 in the case of students who are going to take the baccalaureate, show an increase in distress in the period preceding the exams.

Regarding the first year students at the college, the t test for repeated measurements indicates significant differences between the self-isolation stage and the one preceding the exams in the session (t=2.17, p>.03). The analyzed averages m self-isolation=59.13, s.d.=17.35 and m pre-examination=63.03, s.d.=16.75 in the case of students who are to take the session exams, show an increase of distress in the period preceding the exams.

Regarding the correlation of irrationality with exam performance, we used the Bravais Pearson (P) test. We obtained a negative global correlation of (P=-.654 (p=.00) between the total irrationality and the average in exams. The level of irrationality correlates positively with the intensity of stress (P=.591, (p=.00). The self-perceived stress before the exams correlates negatively with the exam performance (P=-.551 (p=.00). We mention that the grading in exams is done on a scale from 1-10, grade 4 being insufficient for graduation at middle school and college, and grade 6 being the minimum for the graduation at baccalaureate exam. The performance at the exams registered low and medium values (m middle school=6.17, s.d.=1.36; m high school=7.30, s.d.=.94; m students=7.17, s.d.=1.10). 6 middle school graduates and 4 high school graduates did not pass the exams.

Conclusions and Recommendations

Stress is a response of the body to the perception of threatening situations or that have the potential to disrupt the homeostasis of the individual (De Kloet, Joels & Holsboer, 2005). In the context of the pandemic, each of us responded with a certain amount of stress and anxiety, which mobilized the body's resources for the current period. Worry, anxiety, fear, sleep and eating disorders, concern for the personal and family health are stressful generators variables (Vinkers et al, 2020).

And groups of vulnerable people are mentioned, not only the elderly, but also children and adolescents (centers for desease control and prevention CD C 24/7, saving life, protecting people). The data of our study indicate that the young population perceived the period of self-isolation as a period characterized by high levels of stress. The idea of self-isolation, of limiting individual freedoms, which involves limiting travel, restricting school social, recreational and occupational activities has generated a response characterized by distress. However, the pandemic graduation of an educational cycle involved the extra-addition of a stressor with great relevance for each of the participants. Against the background of circumstantial stress, a situational stressor was added.

Irrational cognitions (the absolutist requirement for justice, global assessment, low tolerance for frustration given by work and rules) have been identified as being present in adolescents undergoing school examinations. They differ significantly at the three stages of age. Regardless of the age stage, there are high levels of distress in young people where the presence of irrational beliefs is found.

Exam performance correlates negatively with irrationality and stress. The higher the level of irrationality and distress, the lower the performance. Therefore, the specialized interventions should consider methods to combat irrationality, providing adaptive models for interpreting stressful life situations during the pandemic periods and beyond. Irrationality predisposes the individual to an absolutist, rigid approach to reality, to low tolerance to frustration when it comes to rules and work, negative global evaluations related to the low school performance. Rationality involves specific and not global assessments of a situation or one's own person, increased tolerance for frustration, and flexible demands for justice, with a positive impact on the school performance.

Specific and particular situational events generating distress (situational stressors) superposed over a circumstantial background stressor (circumstantial stress) generates higher intensity of distress, with different substrate/background depending on the rationality or irrationality of the cognitive schemes (irrational or rational). A rational approach to reality and personal demands can be the key to long-term performance, so to functionality, with a positive psychological impact.

Plagiarism Rate=5%

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Pedagogical Strategy for Teachers to Promote Students' Civic Competence: The Analysis of Theoretical Aspects and Development of Pedagogical Concept

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Abstract
Awareness of the importance of civic competence through professional and systematic approach implementing civic education at all levels of education, can provide development of civic competence of young people, which in turn would contribute to the development of civil society in various aspects. To realize productive, targeted and successful implementation of civic education, promotes the civic position of students and the necessary skills to make students civically active and responsible. Therefore, it is necessary to develop a pedagogical strategy and clarify the theory, to promote the civic competence of young people. The aim of the article is: using theoretical cognitive methods and analysing the theoretical framework of civic competence, develop pedagogical strategy for teachers to promote the civic competence of students. In the publication authors analyse the theoretical framework for civic competence, providing a description of civic competence, as well as highlighting the most effective pedagogical approaches to promote civic competence of students in the pedagogical process.
Keywords: Civic competence, civic education, pedagogical process, pedagogical strategy, students.

Introduction

The formation of civil society and the preservation of democratic values at local, regional, national and international level promote civic education at school and at the same time social environment is demanded to contribute to the development of civic competence. the European Commission emphasizes: „civic competence can contribute to better engagement in life, but it must be based on sustainable knowledge of social values, political concepts and structures, as well as the commitment to active and democratic inclusion in society. Promoting justice, social cohesion and active citizenship in school education is also one of the main objectives of the current strategic framework for European cooperation in education and training" (European Commission, 2007, 10).

To organise the purposeful learning of the content of civic education in schools, it is important to understand the process of formation of the civic competence of young people to ensure the implementation of civic education program in the school environment, thus promoting the acquisition of civic education at school. Civic education, which implements the formation of civic competence, has an inclusive character and therefore relies mainly on a cross-disciplinary approach. Having regard to the concept of civic education and the development of a civic education programme in schools, corresponding to the content of the concept of civic education and focusing on the development of the civic competence of the students, it is important to identify achievable results through a cross-disciplinary approach to learning content and being aware of the holistic approach to civic education in the pedagogical process.

It is important to highlight the competence-based educational content in schools in this process, to improve it through highlighting the importance of civic education and the development of youth civic responsibility. As a result of theoretical research, which is reflected in this article, the authors have created pedagogical strategy to promote the civic competence of youth. The pedagogical strategy can be implemented within the framework of civic education in order to promote the development of the civic competence of students in in the process of acquiring learning content, on the basis of the principles of human pedagogy, implementing process-oriented and competence-based as well as interdisciplinary and individual approaches, promoting students' holistic understanding of the topicality and necessity of civic competence.

Diversity of theoretical framework for civic competence

Theory analysis reveals the multi-faceted explanation of civic competence. Civic competence includes: (I) civic knowledge of democracy; (II) skills to work in cooperation with others, information gathering, analysis and presentation skills, skills to defend their views and positions in a reasoned way; (III) the ability to serve the public interest, to strike a balance between the interests of the group/society and personal interests, respect for human freedom and dignity (Brammer et al., 2013: 10). Civic competence is a defined knowledge of the political and legal framework, it is an individual's attitude as tolerance and respect, as well as the skills to participate in political discussions in defending personal civic position (Abs & Veldhuis, 2006). Moreover, it should be noted that the development of individual's critical and analytical thinking is one of the fundamental principles of the formation of democratic society (Огурцов & Платонов, 2004). Civic competence includes the ability of young people to deal with life and societal dilemmas, to think critically and, based on diversity of information, to take civic decisions (LeCompte, Blevins & Riggers-Piehl, 2020). In addition to this knowledge, attitudes and skills, civic competence also includes specific behaviour, value awareness and individual self- realization.

Civic competence consists of both academic and civic knowledge and civic skills, civic values and attitudes, actions arising from human identity (Stokamer, 2013, 114). Researcher F. Audigier reveals the interpretation of civic competence, which it is based on cognitive competence, emotional competence and social competence in the form of individual freedom of choice (Audigier, 2000). It should be noted that civic competence for European citizens is necessary for the survival of European democracy at local, national and international level (Hoskins, Villalba & Saisana, 2012). Civic competence helps to realise civic values of citizens (Котова, 2008), promotes responsibility of students, recognizing their individual place in society and knowing their contribution to it (Himmelmann, 2013). Civic competence should be based on the development of the civic skills of students (Bengtsson, 2015), which promotes the long-term participation (Hoskins, Villalba & Saisana, 2015) and civic responsibility (Nigmatov & Yarullin, 2015). Civic competence includes a certain pattern of individual behaviour (Chow, 2012), so it is necessary to provide meaningful learning in the context of social reality challenges (Tesileanu, 2014) in order to build the civic competence of students in the pedagogical process and an appropriate microclimate in a classroom, where students would be open (Zhang, Torney-Purta & Barber, 2012). The European Council (2018) offers recommendations on key competence for lifelong learning, where the content framework of civic competence (knowledge, skills and attitudes) is based on the components of knowledge, active civic capacity, civic responsibility, identity dignity, equality, cultural diversity, human rights and democratic values, with a view to ensuring the sustainability of society and quality of life (Council of the European Union, 2018). The content of civic competence proposed by the Council of Europe Union is very diverse, current, it is based on components of knowledge, active capacity, civic responsibility, civic engagement, identity dignity, equality, cultural diversity, human rights and democratic values, with a view to ensuring the sustainability of society and quality of life.

The analysed researches show the need for the development and promotion of young people's civic skills in the pedagogical process and preparing students for life in the variable social reality. It should be noted that the explanations of civic competence analysed above show several common elements, which constitute an understanding of the structure of civic competence. They are:

- knowledge – mainly on the nature of democracy, human rights issues, the political system and its expression in the broadest context, understanding of the opportunities for civic engagement and history of the country, which is an integral part of identity building;
- skills to participate in decision-making and other forms of civic engagement, cooperation with others and argumentation skills;

- civic attitudes, understanding of different values of society, respect and recognition of other people's political, socio-economic religious and ethnic beliefs.

Based on theoretical research, the civic competence can be formulated as a synergy between civic knowledge, skills, attitudes and the experience acquired by the individual, which determines the future civic position and capacity of the human. A more detailed explanation of the concept of civic competence is illustrated graphically in Figure No. 1.

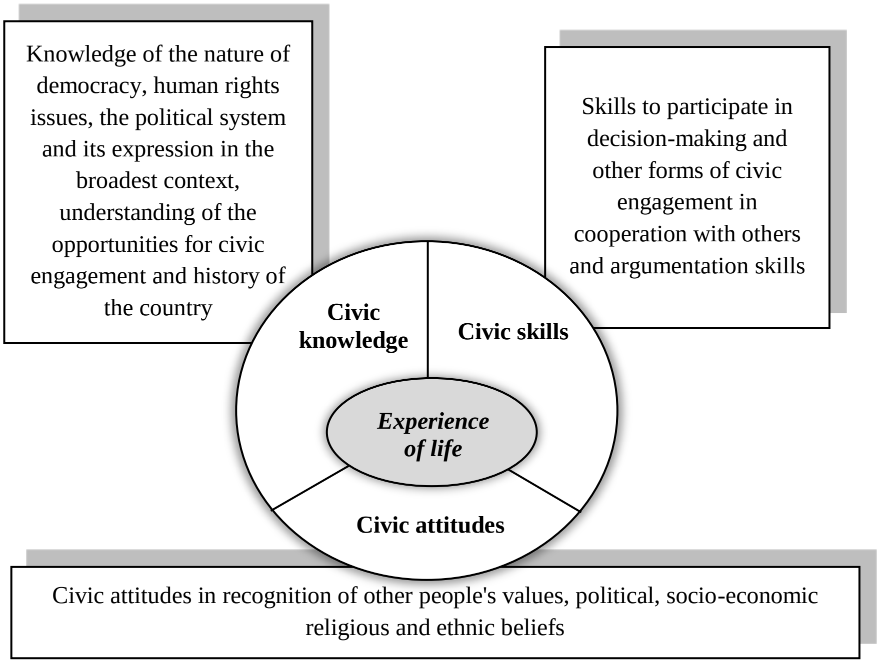

Figure 1. Theoretical concept of civic competence

Theoretical development of a pedagogical strategy to promote the civic competence of students

To summarize the theoretical findings, which are analyzed in this chapter, the authors provide visualisation of pedagogical strategy for teachers to promote the civic competence of students' (Figure No. 2). The pedagogical strategy can be implemented within the framework of civic education in order to promote the development of the civic competence of students in existing educational content, on the basis of the principles of human pedagogy, performing process-oriented and competence-based, interdisciplinary and individual approaches, promoting the student's holistic understanding of the topicality and necessity of civic competence

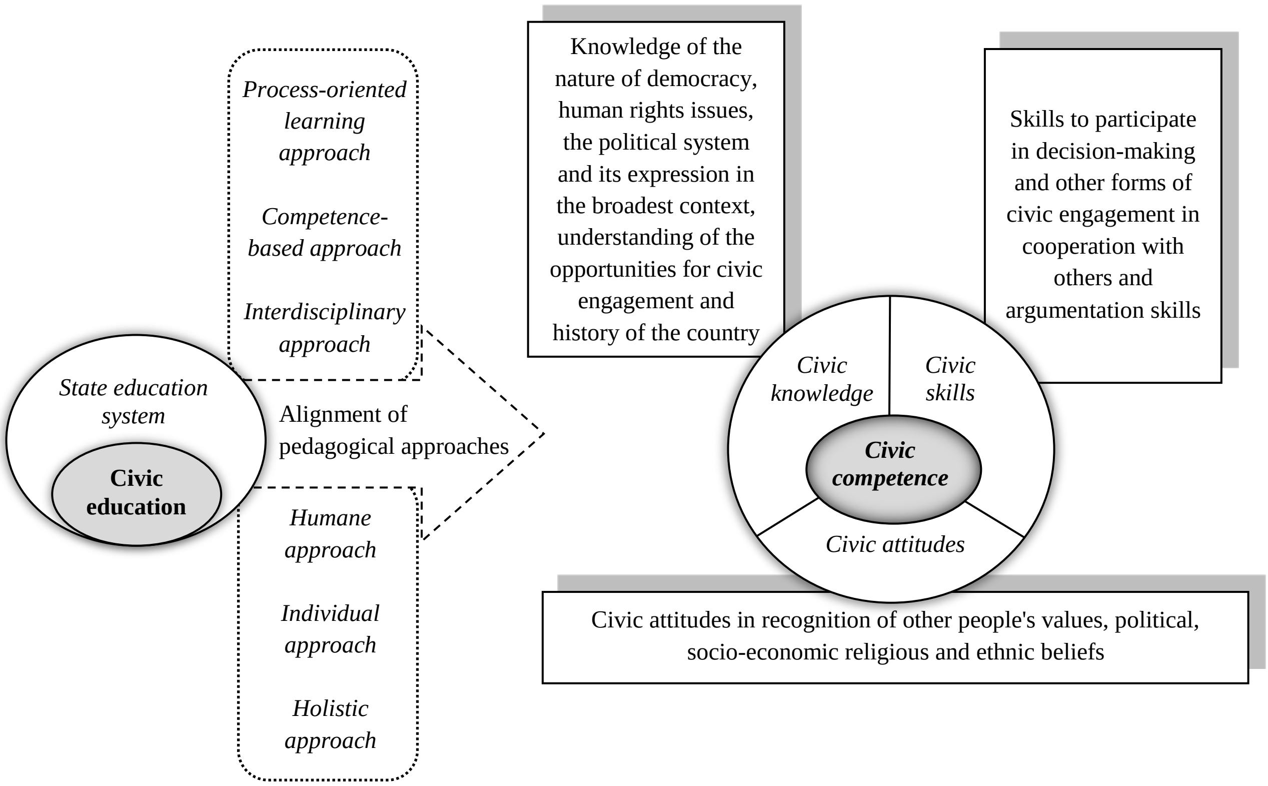

Figure 2. Pedagogical strategy to promote the civic competence of students

Developing young people's civic competence and individual civic capacity is capable of a pedagogical strategy in which the aim of the school and family and the challenge of the teacher is to raise the skills needed for students, develop skills and responsible attitudes towards themselves and around them. As Sh. Amonashvili admits in his work „The essence of the School" that: „school builds the world, forms a targeted, humane and accountable citizen. School strengthens the spirit of society and forms the country. Faith, justice, love, humanity, culture and conscience are the values of the school, expressed as national spirit, national self-awareness and national culture. At present, it is important to review the content of education according to mentally universal values, the world of youth knowledge. Educational and training programmes must be alive with the use of knowledge" (Амонашвили, 2008, 1; 32). Fundamental principles of humanitarian pedagogies include revealing students' needs and growth incentives, their knowledge, abilities and skills. Human being is born to be a unique and useful individuality for society. This is exactly what the teacher must do – helping the student in the process of the becoming a person who is capable of action, civic responsibility, competent, confident and active in public events with a high sense of responsibility, person who is indifferent to the surrounding social environment. The teacher, who is aware of the diverse development of the potential of students in general and the individuality and uniqueness of students, helps them to prepare for meaningful action in objective reality and contributes to the development and development of learners' personalities through their pedagogical professionalism. It is equally important to promote the holistic understanding of the world vision of students in the learning process, which develops the critical capabilities and promotes the confidence of students. Researcher P. Nandish highlights: it is a cooperation between the teaching and learning process between the student and the teacher, in which the self-empowerment of the student is achieved, recognising the needs of the students in a social context (Nandish, 2003). Consequently, there are three legislative questions to which the teacher must find answers: „what civic knowledge, skills and attitudes are needed to make the student as a democratic and accountable citizen? Why is it necessary? How can the citizen-responsible behaviour and attitudes of the pupil be shaped?" (Hamot, 2003, 125-127). In the context of education, everything is interlinked and subordinated, and it is therefore very important to respect the principles of the approach of common health in childhood.

It should be acknowledged that there are different pedagogical approaches to the implementation of civic education in schools, possibly due to the versatility of human attitudes, for example, in addition to a holistic approach, the teacher can also apply other pedagogical approaches: systems, complex, personality or operational approaches. Regardless of the teaching approaches applied by the teacher in the use of diverse techniques, in the context of the formation of civic competence, to contribute significantly to the practical functioning of teacher. The individual personality characteristics of students and the specific situation are the prerequisites for increasing the diversity of teaching approaches. However, even more important prerequisite for the development of the civic competence of students in schools, is to help young people believe, inspire students and provide them with the help they need, serving the teacher itself as a known model. If the teachers themselves do not show, with their own example of life, behaviour and attitudes, to students who are responsible for civic action and the importance of individual civic positions, then there will be a loss of meaning for civic education in general, it will simply not be worth it.

In the framework of youth civic competence and in the pedagogical implementation strategy cross-curricular links are also very important. Learning the content of education, based on a cross-disciplinary approach, strongly contributes to the holistic understanding of existing legal relationships of the student, helps the student to see the need for a survey process, linking the learning process to individual and societal needs. At the same time, ensuring a cross-disciplinary approach in the pedagogical strategy also requires mutual cooperation between teachers, seeing the need for an interdisciplinary approach to daily work. The cross-disciplinary approach is crucial in the process of implementing civic education by developing the civic competence of students. At the same time, it is essential to follow a process-oriented learning approach, approach to the development of youth civic competence and the implementation of civic education, where, in the context of skills formation, the result becomes secondary, more important is the process of acquiring youth civic engagement skills. The application of the individual approach is equally important component of pedagogical approaches in the process of developing youth civic competence, is. Ensuring an individual approach is based on genuine and in-depth respect for the student, knowing and understanding the individual development characteristics of the student. Educator J. Stepanov explaining the individual nature of the approach, describes the purpose of the individual approach: „promote self-fulfilment, self-development, adaptation, self-regulation and self-development of a pupil to interact with the surrounding world in a productive way" (Степанов, 2003, 6).

Ensuring a link between subjects, focusing the learning process on the development of civic competence, using a process-oriented learning approach, interdisciplinary approach, individual approach, and linking educational content to objective reality, can contribute to the civic motivation, civic responsibility and civic capacity of students as well as civic engagement, thus creating the civic position of the student. At the same time, the need for an individual and differentiated approach must not be forgotten, including the development of civic competence for young people. The researcher A. Lidaka emphasizes that: „when choosing pedagogical methods, it is not necessary to copy the recommendations that someone makes. It is much more important to look at each child individually in order to promote the awareness, understanding and acceptance of the values that are most important to him or her" (Līdaka, 2007, 59) thus highlighting the importance of the teacher's professional competence and individual position in the pedagogical process.

Acquiring knowledge cannot and must not be the only component in the development of youth civic competence. The development of attitudes in the pedagogical process and the development of practical skills for students are a much more important factors. In order to promote the civic awareness of students, it is essential to raise awareness among students of the importance of civic participation by ensuring the transfer of knowledge from the learning environment to social reality. Thus, a competence-based approach gains the spotlight in the pedagogical process of creating youth citizenship. According to the researchers (Z., Olina, D., Namsone, I., France) describing a competence-based learning approach: „the development of competence is linked to learning in-depth – a process in which the student develops the capacity to generalise, transfer new knowledge and skills to unknown situations (including life situations), by putting processes in the forefront, which means that we acquire knowledge (how do we know?), not only would accrue a certain amount of content (what do we know?). Implementing a methodical approach that leads learning to go through, the teacher provides an opportunity for a student to operate high-level thinking skills (analyse, synthesize, evaluate, solve problems), develop the metacognitive skills of students so that the student can construct the meaning learned and use the experience of addressing complex challenges in new situations and contexts" (Oliņa, Namsone & France, 2018, 20-21).

A directly competence-based learning approach is the methodological basis of the pedagogical strategy, which ensures and facilitates the development of civic competence, helps students to use acquired civic knowledge, diverse civic engagement skills and to express their civic responsibility by looking for solutions to the various challenges of life.

Conclusions

1. The civic position of young people, formed by civic education as an integrated component of attitudes, is the relationship of the individual with a society. This relationship defines youth's responsibilities towards the country and conscientious and accountable attitudes towards people. Civic education, at the same time, is based on the development of certain values, the values of young people's lives and attitudes.
2. It is very important to find strategies in a diverse pedagogical process that enable students to take civic responsibility in the practical field, providing them all the necessary support. As only directly, through the activities and actions promoting students' civic responsibility, both in direct learning and out-of-hours activities, the development of civic position can be targeted and promoted effectively. Students civic responsibility is reflected in the specific pattern of behaviour, thereby also satisfying the social and emotional needs of the student itself.
3. The development of youth civic competence is closely linked to the content of state education system, civic education implemented, and the pedagogical methods and forms selected. Promoting the learning process of a student forms the knowledge of the fundamental values of democracy, the history of the country and cultural traditions, promoting the skills of students to take responsibility for themselves and the society. The pedagogical strategy for civic education aims to shape and influence the capacity of young people to be an active citizen and responsible member of society.
4. The concept of civic education reveals the need to enrich not only the knowledge of students in the learning process but also to promote the development of civic skills and attitudes, preparing students for social reality of life, recognising the needs and values of fellow human beings, being aware of their potential contribution to the development of their country, and looking for ways to improve the quality of life in the long term. The implementation of civic education in schools can provide students with reasonable confidence in their capacity to act responsibly under the active civic position.
5. Youth civic competence stems from the multifaceted implementation strategy of civic education, based on the understanding of democratic values, promoting the civic responsibility, capacity and active civic engagement of students.

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