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FOREWORD

Dear Readers!

This year's second issue of Acta Educationis Generalis reflects on the current situation in education and research in a range of fields of humanities and social sciences. Its ambition is to bring the most up-to-date research results from European and other universities and to disseminate experts' experiences from their own educational practice and scientific research work in the form of papers, but also more complex presentations.

The new issue of Acta Educationis Generalis - containing studies and a scholarly paper - presents the recent results of selected research conducted by various universities' academic workers. As a part of scientific research plans and projects, questions focusing on a wide range of didactic-methodical, pedagogical-psychological, comparative, medial, managerial, and other social issues are dealt with. Several studies present new trends and prognoses in an interdisciplinary context from mutually related thematic branches, especially pedagogy, field didactics, educational psychology, philosophy, and school management.

In the field of education, the authors of the first study focus on the issues of developing creative writing and social-emotional skills in primary school students by means of collaborative digital storytelling, which helps students develop many skills such as searching for information, writing scripts, organisation, presentation, communication, and problem solving. It is undoubtedly a modern method of education.

The following study aims to determine the level of social-emotional health of church school students and relations between the variables of social-emotional health and psychological well-being. The findings show that that there is a strong positive correlation between overall social-emotional health referred to covitality and psychological well-being. It can be considered a challenge for practicing teachers.

The issues of field didactics are dealt with in the next study, the authors of which investigate into PYP practitioner preschool teachers' science teaching practices. Primary Years Programme covers the education process between the ages of 3-12. The role of the teacher is important in the PYP program. Through PYP, children are supported to make choices, use materials creatively, make inquiries, work cooperatively, and gain the ability to continue and make sense of their interests.

The impact of online learning - which increased rapidly during the 2020 school year due to COVID-19 - on transfer students' performance is in the centre of attention of our author from the American university environment. He claims that students differ in terms of their success with online learning and some of them may be vulnerable. The paper studies the performance of transfer students in online classes versus in-person classes. These results suggest that transfer students may not be adapting to fully online learning as well as control students guided by their teachers in the school environment.

In the current digital world - and especially within the educational process - teachers' ICT competences in relation to using technology, pedagogical attitudes, and content planning have an important role to play - as stated in the next study from outside Europe. In the presented study, ICT integration competences of pre-service teachers are examined in terms of a range of variables. It is a topical field of research.

The next research study from the Czech Republic deals with family cooperation with an institution of pre-school education in the field of media education. One of its conclusions is that an early intervention can teach children to use media for their benefit and prevent having media a negative influence on them. The negative consequences of unrestrained effects of e.g. television or mobile phones have been empirically proven.

A bibliometric analysis of 168 articles from the Web of Science database in the field of social studies, which is a discipline that aims to develop a human model with certain features applicable both for researchers' own countries and globally, is presented in the following study. For sure, it can serve as a useful guide for interested scholars or policy makers when setting trends in the field of social sciences and humanities.

The purpose of the next study is to determine the metaphorical perceptions of preschool teachers in regard with the concept of inclusive education. In the study, phenomenology design and content analysis were applied in order to analyse the data obtained from 113 preschool teachers. In the final phase of evaluation, it was found out that preschool teachers developed 53 different metaphors in 9 categories based on common characteristics. The perceptions of the participants towards inclusive education were generally positive.

In the final paper, difficult situations in the field of school management are in the centre of the author's attention. The author addresses selected issues related to the forms of managers' behaviour in coping with difficult situations in managerial work and deals with the issues of manager's personality, demanding working environment, specific environment of class or school, processes at work, at school or during teaching, management style, workplace culture, selection of suitable candidates for managerial positions, educating

and training managers, but also prediction of possible risk factors when dealing with demanding situations in managerial work.

The studies and papers selected for the current issue of Acta Educationis Generalis deal with highly topical issues researched at universities and research centres worldwide. The content of this issue of the Journal contributes to discussions about a range of problems related to the educational process both in schools and outside them. We believe that Acta Educationis Generalis is useful not only because its topicality, but for being a source of necessary information for teachers, scientists, and university students.

On behalf of the Editorial Office, I wish You a nice summer.

Viola Tamášová
Editor-in-Chief

Acta Educationis Generalis
Volume 11, 2021, Issue 2

STUDIES

Improving Primary School Students' Creative Writing and Social-Emotional Learning Skills through Collaborative Digital Storytelling

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DOI: 10.2478/atd-2021-0009

Received: June 6, 2020; received in revised form: September 29, 2020;
accepted: October 4, 2020

Abstract:
Introduction: It is stated that digital storytelling (DST) involves a process in which students develop many skills such as searching for information, writing scripts, organisation, presentation, communication and problem solving (Robin, 2006). In this process, it is seen that recent studies have started to focus on collaborative digital storytelling (CDST) to support students (Liu, Huang, & Xu, 2018; Nishioka, 2016; Perez, Martinez, & Pineiro, 2016; Perez, Martinez, & Pineiro, 2018; Rubino, Barberis, & Malnati, 2018). Building a digital story as an artefact with a group and examining its effect on creative writing skills can help gain insight into the potential of the CDST. Also, it can be stated that CDST has the potential to provide a suitable environment for social-emotional learning skills. In this regard, this study aims to examine the effect of collaborative digital storytelling on the creative writing and social-emotional learning skills of elementary school fourth grade students.
Methods: In the study, a quasi-experimental design, was used, with pre-test and post-test control groups. A process in which the experimental group was assigned a collaborative digital story, and the control group the task of preparing a visual presentation was designed. 60 students attending the fourth grade of a primary school participated in the study. The control group consisted of 30 students (14 females and 16 males), and the experimental group was also 30 students (15 female and 15 male students). The research was carried out in the 2017-2018 academic year and the implementation process lasted 11 weeks. Writing activities of the students were scored with the Creative Writing Rubric developed by Öztürk

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(2007). The Creative Writing Rubric is composed of eight sub-dimensions: (a) originality of ideas, (b) fluency of thoughts, (c) flexibility of thoughts, (d) word richness (selection), (e) sentence structure, (f) organisation (introduction to writing, development and outcome), (g) writing style, (h) compliance with grammar rules. The Social-emotional Learning Skills Scale developed by Kabakçı and Owen (2010) was used to measure social-emotional learning skills. There are 40 items on a 4-point Likert scale which consists of four factors: problem solving, communication, increasing self-value and coping with stress. In the study, paired samples t-test and single factor ANCOVA analysis were used and effect size ($\eta 2$) and Cohen's d were calculated.

Results: According to the t-test results for dependent groups, an increase between pre-test and post-test scores was found significant for creative writing in both the experimental ($t(29)=8.623$; $p=0{,}000$) and the control group ($t(29)=5.259$; $p=0{,}000$).When the calculated effect size values are examined, it is seen that there is a large effect size for the experimental group (Cohen's $d=0.88$) and a medium (Cohen's $d=0.54$) for the control group (Cohen, 1988). For social-emotional learning skills, a statistically significant difference was found between pre-test and post-test scores in both experimental ($t(29)=2.518$; $p=0.018$) and control groups ($t(29)= 3.934$; $p=0.000$). The effect size is small for both in the experimental (Cohen's $d=0.42$) and control groups (Cohen's $d=0.42$) for social-emotional learning. When pre-test scores were kept constant, a single factor covariance analysis (ANCOVA) was conducted to examine whether the collaborative digital story preparation process had a significant effect on the post-test scores of the groups. According to the ANCOVA results, there was a significant difference between the creative writing post-test scores of the groups, $F(1, 57)=7.09$, $p<0.05$. In other words, the experimental process had an impact on creative writing. It is seen that the effect size value is calculated as $\eta 2=0.111$. According to the ANCOVA results, there was no significant difference between the social-emotional learning skills post-test scores of the groups, $F(1, 57)=0.137$, $p> 0.05$.

Discussion: When the experimental and control groups were compared, it was concluded that the experimental process had a moderate effect in favour of the experimental group on the creative writing skill. When the related literature is examined, studies-support these results. Schmoelz (2018) stated that the specific stages of digital storytelling are very important for providing co-creativity, especially the story production stage enables the co-creative flow experience. According to Daigle (2008), digital storytelling requires writing skills and creativity. It can be used effectively where DST is considered as a means of developing narrative knowledge (Garcia & Rossiter, 2010). When the social-emotional learning skills were examined, it was seen that there was an improvement in both the experimental group and the control group when the implementation process was completed. However, it was concluded that the experimental process did not have a significant effect on social-emotional learning skills. This may be because the students in both groups performed a

collaborative study. Future studies may focus on an in-depth understanding of the process by conducting a qualitative study within the context of CDST and social-emotional learning skills. As a result of this study, it can be concluded that CDST improved students' creative writing skills and can be used in language lessons.
Conclusions: In the study, it was observed by the researchers that CDST was more advantageous in terms of time and application. Future research may focus on comparing individual and collaborative digital storytelling. Other research may examine the effect of CDST on the attitudes of students towards collaborative work. This study was designed with a quantitative method, and research can be conducted in the future using a qualitative or mixed method that addresses students' experiences, difficulties, teachers and parents' views in the process.

Key words: collaborative digital storytelling, creative writing, social-emotional learning.

Introduction

In recent years, it is seen that the knowledge and the skills that the future workforce should possess have been updated as a reflection of the developments in technology. These competencies are addressed under three headings: foundational literacies, competencies, character qualities (World Economic Forum, 2015). In this context, students are expected to have competencies such as problem solving, creativity, communication and collaboration in addition to core skills that include various kinds of literacy. Moreover, character traits such as curiosity, persistence, leadership and social-cultural awareness are addressed. According to the report of the World Economic Forum titled "The Future of Jobs" (2016), creativity and emotional intelligence are among the top ten skills of the future. In addition to the economic function of education, it is important to acquire these competencies within the scope of the individual's self-empowerment and wellness. In order to gain these skills, digital storytelling (DST) has the potential to encourage the individual in productive and creative technology use. DST is defined as the story creation process, with digital tools including interactive and multimedia technologies (Rubino et al., 2018). DST is considered a work in which all people share their experiences in a certain digital format and provide production and sharing together (Şimşek, Usluel, Sarıca, & Tekeli, 2018). According to Daigle (2008), the DST process incorporates visual, auditory and kinesthetic approaches to learning, while combining personal experience as a story of writing experience. DST fosters learners' 'autonomy while structuring students' evolving identities and experiences (Grigsby, Theard-Griggs, & Lilly, 2015).

In recent years, there has been an increase in the use of DST in the educational context, and studies have been carried out in this regard. The effect of DST on

many variables such as academic performance (Çiçek, 2018; Gömleksiz & Pullu, 2017; Yang & Wu, 2012), problem-solving skills (Hung, Hwang, & Huang, 2012), critical thinking (Yang & Wu, 2012), emotional intelligence (Pieterse & Quilling, 2011), writing skills (Sarıca & Usluel, 2016), language learning (Kurudayıoğlu & Bal, 2014; Yoon, 2013), have been examined in the last decade. It is also stated that sharing the digital stories provides a neutral environment where students feel safer, which offers a number of advantages compared to traditional storytelling (Duveskog, Tedre, Sedano, & Sutinen, 2012). Robin (2006) described DST as involves a process in which students develop many skills such as searching for information, writing scripts, organisation, presentation, communication and problem solving. In this process, recent studies have started to focus on collaborative digital storytelling to support students (Liu et al., 2018; Nishioka, 2016; Perez et al., 2016; Perez et al., 2018; Rubino et al., 2018). CDST is considered an effective strategy that supports students' skills and competences (Perez et al., 2018). Collaborative work can help students develop language skills and collaborative work skills by allowing them to rehearse specific assignments with their peers (Laborda, 2009). Collaborative story writing can support students to write richer and more coherent stories by providing discussion (Gelmini-Hornsby, Ainsworth, & O'Malley, 2011). In addition, digital stories prepared with the group help students to show better autonomy and enable more positive emotional experiences compared to individual digital stories (Liu et al., 2018). This study focuses on examining the effect of CDST on creative writing and social-emotional learning. The next section is devoted to the relationship between CDST and creative writing and social emotional learning, respectively.

1 CDST and creative writing

Encouraging creativity is important for everyone in terms of making life worth living and helping the self-realisation of individuals (Lee, 2019). The production of fictional narratives or written presentations is defined as creative writing (Nettle, 2009). Creative writing is not only a complex problem-solving activity, it is a process in which language is used to reflect, discover and express one's own experiences in a unique, creative and meaningful way (Vass et al., 2008). Factors such as observation, explanation, production, imagination, intrinsic motivation, and perseverance play key roles in the creative writing process (Barbot et al., 2012).

It is noteworthy that research in recent years has not adequately addressed digital technologies to support creative writing (Connolly & Burn, 2019). The process of digital storytelling begins with the writing process of scriptwriting, and it can be argued that this can provide a suitable environment for encouraging creative writing skills. Through digital storytelling, students can creatively apply how to write the story and how to combine it using technology (Miller, 2010). Digital storytelling allows students to produce a multi-modal artefact that is very similar

to the texts they encounter through the media as part of their daily lives (Hafner & Miller, 2011). Also, DST makes students feel the sense of writing and that students can develop themselves in the field of story writing with creative ideas (Liu et al., 2011). Various studies have demonstrated that digital storytelling improves writing skills (Green, 2011; Sarıca & Usluel, 2016). However, writing is not a lonely activity, even if it is undertaken by one person (Rojas-Drummond, Albarrán, & Littleton, 2008). It can be argued that there is a gap in the literature regarding the effect of collaborative digital stories on writing and creative writing skills. Writing is a sociocultural process, given that its learning takes place where designed by society (Rojas-Drummond et al., 2008). Building an artefact as a group and examining its effect on creative writing skills can help gain insight into the potential of the CDST. As a matter of fact, it is stated that CDST positively affects students' creativity (Rubino et al., 2018; Perez et al., 2016).

2 CDST and social-emotional learning

Although parents and teachers want schools to support their ability to be lifelong learners who can love, work and act as responsible members of the community, these values are not sufficiently integrated into the education system (Cohen, 2006). Concerns about the vulnerability of children and young people to social and psychological problems and the role of schools in overcoming such risks have led to the spread of efforts to make children more socially and emotionally competent (Hoffman, 2009). Social-emotional learning is the process of understanding and managing the emotions of children and adults, setting positive goals and achieving them, feeling empathy, establishing positive relationships and making responsible decisions to maintain them (CASEL, 2020). According to CASEL (2017), there are five competencies in social-emotional learning: self-awareness, social awareness, responsible decision making, self-management, relationship skills. DST has the potential to provide a suitable environment for social emotional learning skills. Especially in collaborative studies, students can develop more sense of belonging and cohesion in their groups (Harfitt, 2012). Borges, Kirkham, Deardoff, & Moore (2012) showed that when collaborative work is used as a teaching strategy, university students significantly increase their ability to manage their emotions. It has been determined that the students included in digital story writing participate and exhibit a positive attitude towards collaboration (Ranieri & Bruni, 2013). Some studies examine the effect of digital story preparation on emotional intelligence (Pieterse & Quilling, 2011). It has been observed that CDST affects the development of students' social-emotional skills positively (Perez et al., 2018).

3 The present study

This study aimed to examine the effect of CDST on creative writing and social-emotional learning skills. The following research questions are formulated:
RQ1. Is there a significant difference between the creative writing and social-emotional learning pre-test and post-test scores of the students in the experimental and control groups?
RQ2. Is there a significant difference between the creative writing and social-emotional post-test scores of the students between the experimental and control groups?

4 Methodology

4.1 Participants

The study was carried out in the academic year 2017-2018. 60 students attending the fourth grade of a primary school participated in the study. The control group consisted of 30 students (14 females and 16 males), and the experimental group was also 30 students (15 female and 15 male students). Before the research began, ethical approval was received from the university ethics committee. In addition, an information meeting about the research was held with the parents of the students. All of the parents filled in their voluntary consent forms and allowed their children to participate in the study. The study took place in four classes in the fourth grade of an elementary school in Turkey. The first author of this study works as a classroom teacher at the school where the implementation was made. The activities in the experimental and control groups were carried out by the first author in appropriate time periods considering the class schedules.

4.2 Study design

Figure 1. The study design.

In the study there were pre-test and post-test control groups. A quasi-experimental design was used, in which the experimental group was assigned a

collaborative digital story, and the control group the task of preparing a visual presentation. Creative writing scores (Öztürk, 2007) and social-emotional learning skill scores (Kabakçı & Owen, 2010) were collected from the experimental and control groups before and after the implementation. The study design is shown in Figure 1.

In the first week of the research, pre-tests were given after informing students about the studies to be performed. In the second week of the process, students were divided into heterogeneous groups, and ice-breaking activities were carried out by all students in the experimental and control groups to form a team identity. Starting from the third week, the experimental group students collaborated in groups on digital stories. The control group students also worked in groups to prepare a visual presentation per the curriculum.

4.2.1 Experimental group

Starting from the third week of the implementation process, students in the experimental group started to prepare collaborative digital stories.

(1) In the third week, students were first informed about digital storytelling and what they should do in this process. During the presentation, how the digital story is made, what it is and what should be considered was discussed with the students. Then, the students were asked to find a story subject based on their common life as a group. Students were given a week to find the topic of the digital story they would write, by making a joint decision with the other students in their group.

(2) The students formed a story circle in the fourth week. Since the application was group work, the students shared what topic to choose and what they wanted to tell in their stories. After reaching a common decision within the group, they told the story they had created to the classroom teacher (the first author of this study). Then the story was written as a group.

(3) In the fifth week, the students focused on planning the visuals that would be used in the stories. Their stories have been turned into worksheets with three columns. The sequence number is written in the first column, the sentence to be used in the story is placed in the second column, and the relevant image is described in the third column. In addition, members of the group took notes on who would vocalise each sentence in the story. Group members created the worksheets by reviewing the lines they wanted to add or remove. Figure 2 shows a storyboard belonging to one of the collaborative groups. Since one of the students in this group has diabetes, the story is about this student and the experiences of his classmates.

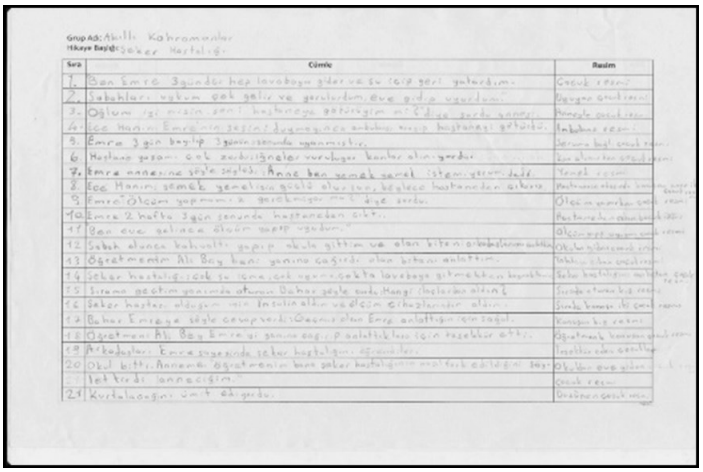

Figure 2. Example of a storyboard.

(4) The students came together to create the visuals they had determined about the lines on the worksheet during the sixth week as part of the pre-production works in the process of the digital story creation. The groups gathered the images they needed from various sources. In some groups, drawings were made by students with talent within the group.
(5) From the seventh week onwards, the students combined the pictures and stories they made in their groups using the Photo Story 3 program. In the eighth week, they recorded their voices using the Microsoft Photo Story 3 program. All the students in the group took part in the vocalisation stage. DST preparation processes in the Photo Story 3 program are given in Figure 3.

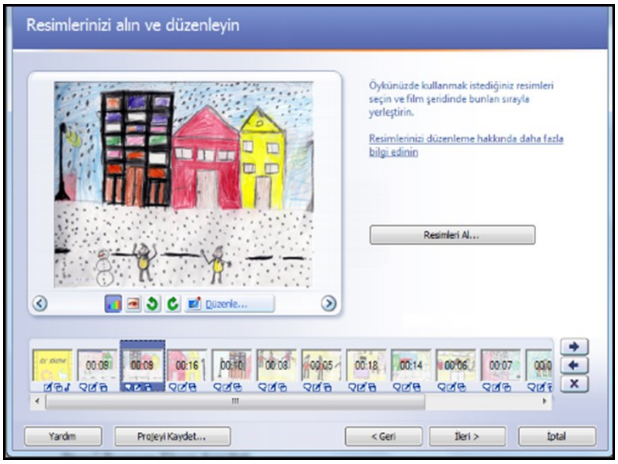

Figure 3. Story production process.

6) In the ninth week, students added text and selected effects with the program they had used to create an effective digital story. In the tenth week, they added music with the help of their teacher. Since the study was a collaborative work, the students carried out a division of labour among themselves in the groups they formed. While creating a digital story, each student took tasks according to their own wishes and abilities. In the post-production stage of the process, the studies conducted were checked again and the areas that were deemed missing were handled under the guidance of the researcher. The digital story products that emerged in the last step of the digital story creation process were shared via the smart board and watched as a whole class (Figure 4).

Figure 4. Story sharing stage.

4.2.2 Control group

In the third week of the implementation process, the process of preparing a poster in the control group started, in accordance with the curriculum. In the process, students collaborated and created the poster of their group with their friends. Various examples of visual materials that had been made before were shown to the students. The students planned how to prepare their visual presentations week by week. While some students drew pictures for the visual presentation they were creating, other students searched on the internet and found pictures related to their subjects. They took the colour printouts of these pictures and made the cutting, editing and pasting operations in the work section. The students prepared the materials related to the topics they had determined and presented them to the class on boards.

4.3 Instruments

4.3.1 Creative Writing Rubric

The writing activities of the students were scored with the Creative Writing Rubric developed by Öztürk (2007). Students created themes primarily for free

writing. These themes were determined by the students as adventure, animals, friendship, space, nature and sharing. The students completed the writing study by choosing a subject according to their interests and wishes. For the post-test, the writing studies of students on the same subjects were scored with the Creative Writing Rubric, which is composed of eight sub-dimensions: (a) originality of ideas, (b) fluency of thoughts, (c) flexibility of thoughts, (d) word richness (selection), (e) sentence structure, (f) organisation (introduction to writing, development and outcome), (g) writing style, (h) compliance with grammar rules. There are values between 1 and 5 points in each sub-dimension. Thus, a student can get at least 8 and at most 40 points from this rubric.

4.3.2 Social-emotional learning skills scale

The Social-emotional Learning Skills Scale developed by Kabakçı and Owen (2010) was used to measure social-emotional learning skills. The data of the students were collected face to face using paper and pencil. Due to the young age of the students in this process, necessary explanations were made and sufficient time was given. There were 40 items on a 4-point Likert scale (1 = It does not fit me at all, 2 = It does not fit me much, 3 = It fits me a lot, 4 = It completely fits me). The items were in four factors: problem solving, communication, increasing self-value and coping with stress. Cronbach's alpha coefficient was calculated as 0.88 for the total scores of the scale. Confirmatory factor analysis fit indices were found as RMSEA = .036, GFI = .90, CFI = .96, AGFI = .89, NFI = .92, NNFI = .96, SRMR = .049. A minimum score of 40 and a maximum of 160 can be obtained from the scale. The scale can be applied both individually and as a group within an average of 15 minutes. In this study, the scale was applied individually.

4.4 Data analysis

In the study, paired samples t-test and single factor ANCOVA analysis were used and effect size (η2) and Cohen's d were calculated. For the covariance analysis, the assumptions about the regression slopes between the groups, the normal distribution, and the equality of variance were examined. Regarding the scores obtained from the creative writing and social-emotional learning skills scale, the regression coefficients were examined for the pre-test and post-test scores (Table 1).

Table 1

Regression curves for creative writing and social-emotional learning scores

Dependent Variable	*Source*	*Sum of Squares*	*df*	*Mean Square*	*F*	*p*
Creative Writing	Pre-test	939.848	1	939.848	144.834	0.000
	Group*pre-test	9.279	1	9.279	1.430	0.237

	Error	363.391	56	6.489		
	Corrected Total	2020.183				
Social-Emotional Learning	Pre-test	4621.063	1	4621.063	54.691	0.000
	Group*pre-test	223.946	1	223.946	2.650	0.109
	Error	4731.633	56	84.493		
	Corrected Total	12282.183				

Accordingly, the interaction of the group and the pre-test was not significant (creative writing: p=0.237, p>0.05; social-emotional learning: p=0.109, p>0.05). For normality, skewness and kurtosis statistics are examined and presented in Table 2.

Table 2

Skewness and kurtosis statistics

	Group	Test	N	Skewness	Kurtosis
Creative Writing	Experimental	Pre-test	30	-0.473	1.612
	Control		30	0.957	1.081
	Experimental	Post-test	30	0.349	-0.045
	Control		30	0.785	1.117
Social-emotional Learning	Experimental	Pre-test	30	-0.275	-0.343
	Control		30	-0.454	0.905
	Experimental	Post-test	30	-0.685	-0.156
	Control		30	-0.432	-0.608

A Levene test was performed for the equality of variances, the creative writing scores for the pre-test scores [F(1,58)=0.016, p>0.05]; for writing post-test scores [F(1,58)=0.333, p>0.05]; for social-emotional learning skills pre-test scores [F(1,58)=2.472, p>0.05]; and [F(1,58)=2.669, p>0.05 for post-test scores. This showed that the variances of the groups are equal in relation to all measurements.

5 Results

5.1 Findings related to the first research question

The first research question is formulated as: "Is there a significant difference between the creative writing and social-emotional learning skills pre-test and post-test scores of the students in the experimental and control groups?" The mean, standard deviation, t, p and effect size values of the students in the experimental and control groups regarding the pre-test and post-test scores of the dependent variables are given in Table 3, where it is seen that there is an increase in the creative writing and social-emotional learning skills scores of both the experimental and control groups. According to the t-test results for dependent groups, an increase between pre-test and post-test scores were found

significant for creative writing in both experimental (t(29)=8.623; p=0,000) and control group (t(29)=5.259; p=0.000).
When the calculated effect size values are examined, it is seen that there is a large effect for the experimental group (Cohen's d=0.88) and a medium effect (Cohen's d=0.54) for the control group (Cohen, 1988). A statistically significant difference was found between pre-test and post-test scores in both experimental (t(29)=2.518; p=0,018) and control groups for social-emotional learning skills (t(29)=3.934; p=0,000). It can be interpreted that the effect size is small for both in experimental (Cohen's d=0.42) and control group (Cohen's d=0.42) for social-emotional learning.

Table 3

Results for paired - samples t-test

	Group	*N*	*Pre-test*		*Post-test*		*t*	*p*	*Effect size(d)*
			M	*SD*	*M*	*SD*			
Creative Writing	Experimental	30	23.97	4.21	28.07	5.05	8.623	0.000	0.88
	Control	30	18.77	4.41	21.17	4.42	5.259	0.000	0.54
Soc.-Em. Learning Skills	Experimental	30	127.12	11.03	131.50	9.82	2.518	0.018	0.42
	Control	30	118.53	17.66	126.07	17.65	3.934	0.000	0.42

5.2 Findings related to the second research problem

The second research question is formulated as: "Is there a significant difference between the creative writing and social-emotional learning post-test scores of students between experiment and control groups?". Before the findings related to this research question were presented, pre-test scores of the groups were examined with the independent group t-test. There was a significant difference in creative writing pre-test scores between the experimental and control groups (t(58)=4.671; p=.000). This indicated that the pre-test scores of the students in the experimental group were significantly higher than the control group before the implementation process. In addition, a significant difference was found in the social-emotional learning pre-test scores of the groups (t(58)=2.262; p=.027), where it was seen that the pre-test scores of the students in the experimental group were significantly higher than the control group. When pre-test scores were kept constant, a single factor covariance analysis (ANCOVA) was conducted to examine whether the collaborative digital story preparation process had a significant effect on the post-test scores of the groups. In Table 4, the post-test scores of the groups, corrected according to the pre-test scores, are included.

Table 4

Post-test scores of the groups and post-test scores corrected according to pre-test scores

			Post-test		*Corrected post-test*	
	Group	*N*	*M*	*SE*	*M*	*SE*
Creative	Experimental	30	28.07	0.77	25.65	0.80
Writing	Control	30	21.17	0.51	23.59	0.51
Social-emotional Learning	Experimental	30	131.50	1.79	128.31	1.74
	Control	30	126.07	3.22	129.24	1.74

ANCOVA analysis results to test whether the observed difference between the corrected creative writing scores of the groups is significant are given in Table 5.

Table 5

ANCOVA results for creative writing post-test scores corrected according to the pre-test scores of the groups

Source	*Type III Sum of Squares*	*df*	*Mean Square*	*F*	*p*	η^2
Pre-test (regression)	6883.790	1	933.36	142.76	0.000	0.715
Group (Post-test)	11.912	1	46.35	7.09	0.010	0.111
Error	4955.580	57	6.53			
Corrected Total	11851.280	59				

According to the ANCOVA results, there was a significant difference between the creative writing post-test scores of the groups, $F(1, 57)=7.09$, $p <0.05$. In other words, the experimental process had an impact on creative writing. It is seen that the effect size value is calculated as $\eta 2=0.111$. Therefore, the experimental process has been found to have a moderate effect. The results of the ANCOVA analysis conducted to test whether the observed difference between the corrected scores of the groups for social-emotional learning is significant is given in Table 6.

Table 6

ANCOVA results for social-emotional learning post-test scores corrected according to the pre-test scores of the groups

Source	*Type III Sum of Squares*	*df*	*Mean Square*	*F*	*p*	η^2
Pre-test (regression)	6883.790	1	6883.790	79.179	0.000	0.581
Group (Post-test)	11.912	1	11.912	0.137	0.713	0.002
Error	4955.580	57	86.940			
Corrected Total	11851.280	59				

According to the ANCOVA results, there was no significant difference between the social-emotional learning skills post-test scores of the groups, $F(1, 57)=0.137$, $p>0.05$. In other words, it was concluded that the experimental process did not have effect on social-emotional learning skills.

6 Discussion

This study aimed to investigate the effect of collaborative digital storytelling on the creative writing and social-emotional learning skills of primary school fourth grade students. In this study, which was carried out following a quasi-experimental design, social-emotional learning skills were measured at the beginning and end of the process, and students' writing studies were evaluated using a rubric. When the experimental and control groups were compared, it was concluded that the experimental process had a moderate effect in favour of the experimental group on the creative writing skill. When the related literature is examined, there are studies supporting these results. Coutinho (2010) claimed that digital storytelling enhances creativity, learning motivation and 21st century communication and technology skills. Moreover, DST involves a process rooted in verbal culture, where the high-level experience reaches a different level of literacy through storytelling and story-building efforts (Şimşek et al., 2018). Schmoelz (2018) identified specific stages of digital storytelling as very important for providing co-creativity, especially the story production stage which enables the co-creative flow experience. A study where digital storytelling was used to support the writing skills of students concluded that in the written products of students, the appropriate title was determined, attention was paid to the order of event; the logical integrity was not impaired (Ciğerci & Gültekin, 2017). According to Daigle (2008), digital storytelling requires writing skills and creativity. It can be used effectively where DST is considered as a means of developing narrative knowledge (Garcia & Rossiter, 2010).

When the social-emotional learning skills were examined, there was an improvement in both the experimental group and the control group when the implementation process was completed. However, the experimental process did not have a significant effect on social-emotional learning skills. Robin (2006) stated that sharing digital stories in various web environments would provide an opportunity to criticise the work, and that social learning and emotional intelligence can improve. Yüksel, Robin, and McNeil (2011) also found that in the process of digital storytelling, students develop empathy, social interaction, and communication skills. In addition, applications related to digital storytelling contribute to the development of cooperative skills and creativity of students by doing group work (Jenkins & Lonsdale, 2007). Although it has been stated in the literature that CDST supports the development of social-emotional learning skills, this study has not been proven experimentally. On the other hand, there was an improvement between the pre-test and post-test scores in both the experimental and control groups. This may be because the students in both

groups performed a collaborative study. Future studies may focus on the in-depth understanding of the process by conducting a qualitative study within the context of CDST and social-emotional learning skills.

Robin (2006) claimed that there is not enough time for implementations when digital storytelling is carried out. Indeed, it takes a lot of time to put together the necessary components for digital story creation and to prepare the story. Similarly, it was stated that it takes a great deal of time to practise the process of digital story creation (Coutinho, 2010) and that the time is not sufficient, especially for writing studies (Kulla-Abbott, 2006). However, there are also studies to create digital stories faster and more easily by studying collaboratively (Karakoyun & Kuzu, 2016). It can be stated that the process of time management is easier within the scope of CDST application in this study.

In this study, students were involved in various tasks in the collaborative digital story creation process. With their interests and abilities, they fulfilled these tasks more eagerly. From time to time they searched for solutions to the problems they faced. It can be said that this situation encourages learning by acting collaboratively. In this context, it is stated that digital storytelling improves students' collaboration and communication skills and that these students are willing to help each other in the face of various problems (Sadik, 2008). Digital storytelling creates an atmosphere of solidarity that offers storytelling as an amateur form and presents verbal, cognitive and affective skills (Şimşek et al., 2018). As a matter of fact, it has been stated that students can help each other and improve their collaboration and solidarity skills during activities related to digital storytelling (Karakoyun & Kuzu, 2016). It is emphasised that the process of digital story creation improves technology skills through the use of computer programs and technological tools (Robin, 2008; Yüksel et al., 2011). Robin (2006) explained that during the digital story creation, students improved their technology literacy by combining multimedia elements such as text, picture and sound through various programs. In addition, Karakoyun & Kuzu (2016) stated that information literacy has improved by researching which information students search for stories. As a result, it can be stated that the CDST process provides experience in using computers and the internet by performing the tasks such as accessing the information over the internet, creating a sound recording, taking photos and editing, choosing music and organising them on the software. In studies on the digital story, educators and researchers working on this topic stated that digital storytelling is an effective application. Many studies show that with digital storytelling, students actively participate in the learning process and increase their meaningful learning, thus obtaining more skills than traditional approaches (Robin, 2008; Wang & Zhan, 2010; Yoon, 2013).

Conclusion

As a result of this study, it can be concluded that CDST improved students' creative writing skills and can be used in language lessons. In the study, it was

observed by the researchers that CDST was more advantageous in terms of time and application. On the other hand, the study has some limitations. Indeed, comparing individual and collaborative DST processes is beyond the scope of this study. On the other hand, future research may focus on comparing individual and collaborative digital storytelling. Other research may examine the effect of CDST on the attitudes of students towards collaborative work. This study was designed with a quantitative method, and research can be conducted in the future using a qualitative or mixed method that addresses students 'experiences, difficulties, teachers and parents' views in the process. Qualitative studies examining the interaction of students with each other in digital story preparation processes with collaborative groups can contribute to the literature.

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Acta Educationis Generalis
Volume 11, 2021, Issue 2

Social-Emotional Health and Psychological Well-Being among Church School Students

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DOI: 10.2478/atd-2021-0010

Received: December 13, 2020; received in revised form: March 3, 2021;
accepted: March 5, 2021

Abstract:
Introduction: This study aims to determine the level of social-emotional health of church school students and relationships among the variables of social-emotional health and psychological well-being.
Methods: The research group consisted of 73 church school students in Presov Region. The data collection tools were the Social – Emotional Health Survey for secondary education (SEHS-S) and the Scale of Psychological Well-Being (PWB). The presented quantitative study has a correlation character with the comparative questions and exploratory - verification design.
Results: The findings of the study showed that there is a strong positive correlation between overall social-emotional health referred to covitality and psychological well-being. Strong and moderate correlations were found among domains and psychological indicators of social-emotional health and dimensions of psychological well-being. A domain belief in others strongly correlates with positive relations with others. A strong correlation has been found between the indicator of peer support and the dimension of positive relations with others. The findings showed a moderately large, statistically significant difference in the level of belief in self in favor of males compared to females. Small and medium-sized differences between males and females were also found at the level of psychological indicators. The level of overall social-emotional health increases with the increase in the mastery of the environmental mastering and positive relations with others, which explains 35% of the data variance.
Discussion: Research indicates relationships between the social-emotional health and psychological well-being as well as among dimensions, domains and indicators. The results support previous findings of other authors. Furthermore, the results showed a significant difference in the level of belief in self domain in favour of males compared to females. This

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finding indicates that males have higher self-confidence while compared to females.
Limitations: There are certain limitations in the research, which include usage of non-standardized methods on Slovak population and a low level of reliability for Psychological Well-being Scale. Among other limitations, we include the time of data collection, which took place during the last class at the end of the week.
Conclusion: Mental Health is about more than mental illness. Being mentally healthy and feeling well is important. To measure and identify elements of mental health may be useful to comprehend and promote psychological strengths of a person. A value of the paper lies in findings concerning social-emotional health of church school students, which contributed to the standardization of SEHS-S in Slovakia. Nevertheless, social-emotional health of Slovak students should not be neglected and further research on a larger sample is needed.

Key words: mental health, social-emotional health, psychological well-being.

Introduction

Mental Health

Mental health is an integral and essential component of health, one cannot exist without the other (Damodaran & Paul, 2016). According to World Health Organization (2004) a health is a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity. Mental health is more than the absence of mental disorders and it is closely connected to physical health (Kolappa et al., 2013). It is a state of well-being, in which an individual realizes own abilities, is able to cope with stress in life, works productively and is capable to make a contribution to the community (WHO, 2004).

Traditionally, One-Dimensional Model perceived mental health as the absence of mental illness (Furlong et al., 2013). Through the lens of the absence of psychopathology (Keyes et al., 2002) improvement occurs due to the absence of mental deficit (Moore et al., 2018). Mental health and mental illness are put on two opposite poles of a continuum, the research of mental health sets bounds to the psychopathology and is focused on mental disorder (Keyes, 2002).

According to the Dual-Factor Model of Mental Health, mental illness and mental wellness do not create a continuum of illness on one end and wellness on the other, but rather complement each other (Dowdy et al., 2014). The Dual-Factor Model or Two Continua Model emphasizes that positive (e.g., subjective well-being, positive strengths) and negative (e.g., distress) indicators of mental health are related but distinct, and the absence of pathology does not necessarily mean a good state of mental health (Suldo & Shaffer, 2008).

A Social-Emotional Health is a sum of positive social and emotional dispositions of a person and it is in line with the dual mental health approach. The aim of the Model of Social-Emotional Health by Michel Furlong is to identify key positive indicators for predicting mental health (Furlong et al., 2014). The Social-Emotional Health Survey system was developed to measure the components of covitality latent structure. It is based on positive psychology, consists of 4 positive main domains and 12 subscales as psychological indicators of mental health. The belief in self domain consists of self-efficacy, persistence and self-awareness. The belief in others domain comprises of family support (Tamášová & Kušnieriková, 2018), institutional support and peer support. Emotional competences consist of cognitive reappraisal, empathy, self-regulation, and the last domain, engaged living, includes gratitude, zest and optimism. The overall Social-Emotional Health is referred to covitality. The Social-Emotional Health Survey (SEHS) has a version for primary, secondary and a higher education (Furlong et al., 2014; You et al., 2013).

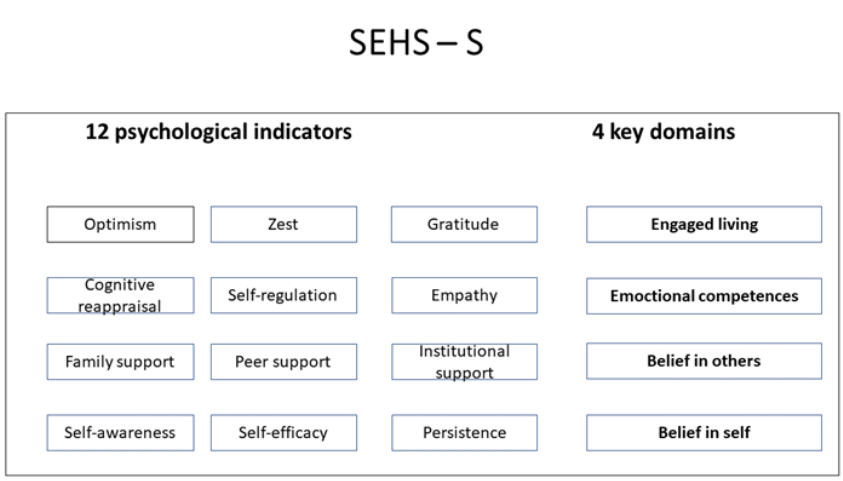

Figure 1. Model of Social-Emotional Health Survey-Secondary (SEHS-S).

Well Being

Well-being is a multidimensional construct which refers to the optimal experience and human functioning. Ed Diener's Subjective Well-Being (SWB) is understood in terms of life satisfaction and a balance of positive and negative emotional states. It is defined by how people cognitively and effectively evaluate their lives. It consists of two components: an emotional and a cognitive-evaluative. The emotional component consists of positive and negative emotions. The cognitive-evaluative includes general satisfaction with life (Diener, Oishi, & Lucas, 2003). Carol Ryff's Psychological well-being is

defined in terms of human's involvement in addressing existential challenges and life issues. This eudaimonic approach perceives well-being as a consequence of overall psychological actualization from which a person develops its own full potential (Vázquez et al., 2009), is based on the concept of human development and existential challenges (Keyes et al., 2002), and it is related to long-term lasting happiness (Opree et al., 2018). Psychological well-being is determined by 6 aspects: self-acceptance; purpose in life; environmental mastery; positive relationships; personal growth; and autonomy (Henn at al., 2016). A person achieves psychological well-being if optimally fulfils all 6 areas that are its sources and direct components (Ryff, 1995). This paper deals with psychological well-being.

The aim of our research was to find the relationships between the social-emotional health and psychological well-being among church school students at the level of covitality, domains (VO1) and psychological indicators (VO2). We gathered evidence for empirical support for the hypothesis (H1) about the positive relationship between covitality and psychological well-being (Furlong, 2013; Boman et al., 2017; Telef & Furlong, 2017) , as well as for hypothesis about the different level of social-emotional health among males and females (H2) (Furlong et al., 2014; Radnoti, 2016). We tried to identify the most significant model which explains the most percent variability of covitality (VO3).

1 Methods

1.1 Participants

The research group consisted of 73 participants of the 3rd and 4th year of church school in Prešov Region. The data was collected in October 2019. The majority of participants, totally 39 (54.2%) were females, and 33 males (45.8%) aged from 17 till 19 years old (M=17.5, SD=.605). More than half of the participants is living in the village (58.3%), less than half comes from the city (41.7%). As many as 86.1% participants are from complete and 12.5% of incomplete families.

1.2 Measures

To measure the social-emotional health in our research, we decided to use the Social-Emotional Health Survey (SEHS-S) for secondary education. The 36-item self-reported, strengths-based measure is to assess 12 positive social-emotional psychological dispositions among students, three items per construct referred as the main domain. The overall Social- emotional health is referred to construct called covitality, which is conceptualized as the synergistic effect of positive mental health (Furlong et al., 2014). Theoretical score range of the instrument is from 36 till 148. Students respond to each of 36 items using a 4-point Likert Scale. Previous studies have supported good psychometric quality

of SEHS-S, internal consistency has been consistent (Furlong et. al, 2014; You et al., 2013; Boman et al., 2017; Timofejova et al., 2016; Radnoti, 2016; Gajdošová et al., 2018).
The internal consistency of SEHS-S questionnaire within our research group is at high level of Crombach alpha for a total score across items α=.852, for main domains belief in self α=.747, belief in others α=.760, emotional competences α=.770, and engaged living α=.834. For psychological indicators subscales there is a following internal consistency: self-efficacy α=.662, self-awareness α=.730, persistence α=.505, institutional support α=.728, family support α=.871, peer support α=.914, cognitive reappraisal α=.535, empathy α=.867, self-regulation α=.518, optimism α=.852, gratitude α=.683, zest α=.874.
Carol D. Ryff's Scale of Psychological Well-Being was used to assess psychological well-being. The instrument consists of 18 statements mapping 6 areas. Participants follow the 7-point Likert Scale. The theoretical score range is from 18 till 126 (Ryff & Singer, 1998). The internal consistency is at an acceptable level α=.754. Cronbach alpha for dimensions is following: positive relationships α=.480, self-acceptance α=.742, autonomy α=.451, personal growth α=.548, environmental mastery α=.606. The lowest level of reliability was verified for the purpose in life (α=.280). If we had removed item number 10, reliability would have increased to α=.633, because it negatively correlates with the rest.
Presented quantitative research has a correlation character with the comparative questions, and exploratory-verification design.

2 Findings

2.1 Social-emotional health and psychological well-being

There is a strong positive correlation between covitality and psychological well-being (r_s=0.608, $p<.01$), between covitality and positive relations with others (r_s=0.528, $p<.01$) as well as between covitality and self-acceptance (r_s=0.550, $p<.01$). Moderate correlation was found between covitality and environmental mastering (r_s=0.395, $p<.01$) and covitality and personal growth (r_s=0.316, $p<.01$). Between covitality and autonomy (r_s=0.284 $p<.05$) as well as covitality and purpose in life (r_s=0.229, $p<.05$) there has been weak correlations manifested. Correlations are presented in Table 1.

Table 1

The correlation matrix of the social-emotional health: covitality and psychological well-being PWB, dimensions included: positive relations with others (PR), self-acceptance (SAC), autonomy (A), personal growth (PG), environmental mastering (EM), purpose in life (PL) within the research group (N=72)

Spearman's rho	*PWB*	*PR*	*SAC*	*A*	*PG*	*EM*	*PL*
covitality	.608**	.528**	.550**	.284*	.316**	*.395***	.229

*p<0.05, **p<0.01

There is a strong positive correlation manifested between belief in others and positive relations with others (rs=0.516, p<.01). Correlations between emotional competencies and self-acceptance (rs=0.470, p<.01), emotional competencies and personal growth (rs=0.372, p<.01) and between emotional competencies and environmental mastering (rs=0.307, p<.01) have been manifested as moderate. Belief in self moderately correlates with self-acceptance (rs=0.383, p<.01) as well as environmental mastering (rs=0.334, p<.01). Moderate correlation has been found between engaged living and positive relations with others (rs=0.301, p<.05). All other correlations were low or very low. Correlations between domains of SEHS-S and dimensions of PWB are presented in Table 2.

Table 2

The correlation matrix of main domains of SEHS-S: belief in self (BS), belief in others (BO), emotional competencies (EC), engaged living (EL) and dimensions of PWB Scale: positive relations with others (PR), self-acceptance (SAC), autonomy (A), personal growth (PG), environmental mastering (EM), purpose in life (PL) within the research group (N=72)

Spearman's rho	*PR*	*SAC*	*A*	*PG*	*EM*	*PL*
BS	.210	.383**	.153	.158**	.334**	.241*
BO	.516**	.227	.036	.053	.248*	.064
EC	.221	.470**	.119	.372**	.307**	.177
EL	.301*	.205	.252	.189	.235*	.095

*p<0.05, **p<0.01

Further analysis showed correlations among psychological indicators of SEHS-S and dimensions of PWB. There is a strong positive correlation between positive relations with others and peer support (rs=0.506, p<.01) and a moderate positive correlation between positive relations with others and subscales family support (rs=0.440, p<.01), self-awareness (rs=0.358, p<.01) and gratitude (rs=0.336, p<.01). Moderate positive correlations have been found between self-acceptance and cognitive reappraisal (rs=0.479, p<.01), self-regulation (rs=0.447, p<.01)

and self-efficacy (rs=0.349, p<.01). According to the further analysis, we found that, there is a weak correlation between autonomy and subscales of self-efficacy (rs=0.241, p<.005), gratitude (rs=0.241) and zest (rs=0.216). Personal growth moderately positively correlates with self-efficacy (rs=0.326, p<.01), cognitive reappraisal (rs=0.315, p<.01) and self-regulation (rs=0.360, p<.01). There is a weak negative correlation between personal growth and peer support (rs=-0.146). Environmental mastering moderately, positively correlates with self-regulation (rs=0.400, p<.01), family support (rs=0.381, p<.01), cognitive reappraisal (rs=0.381, p<.01) and self-efficacy (rs=0.337, p<.01). Other correlations were weak or negligible. Correlations among psychological indicators of SEHS-S and dimensions of PWB are presented in Table 3.

Table 3

The correlation matrix of psychological indicators of SEHS-S: Self-efficacy (SE), Self-awareness (SA), Persistence (PE), Institutional support (IS), Family support (FS), Peer support (PS), Cognitive reappraisal (CR), Empathy (E), Self-regulation (SR), Optimism (O), Gratitude (G), Zest (Z) and dimensions of PWB Positive relations with others (PR), Self-acceptance (SAC), Autonomy (A), Personal Growth (PG), Environmental Mastery (EM), Purpose in life (PL)within research group (N=72)

Spearman's rho	***PR***	***SAC***	***A***	***PG***	***EM***	***PL***
SE	.183	.349**	.241*	.326**	.337**	.080
SA	.358**	.273*	.098	.072	.295*	.154
PE	-.098	.265*	.085	.062	.125	.241*
IS	.137	.214	.118	.152	.126	.148
FS	.440**	.208	.109	.093	.381**	.099
PS	.506**	.135	-.007	-.146	.038	-.220
CR	.158	.479**	.161	.315**	.381**	-.056
E	.081	.180	.115	.240*	-.023	.226
SR	.202	.447**	.080	.360**	.400**	.216
O	.271*	.182	.093	.055	.199	.015
G	.336**	.198	.241	.247*	.190	.291*
Z	.094	.103	.216	.137	.153	-.024

*p<0.05, **p<0.01

2.2 Social-emotional health and gender

Males within the research group reached a level of higher average of social-emotional health (Mdn=108.67, IQR=8.33), females scored at a level of lower average (Mdn=104.00, IQR=5.00). There is a small size effect of the difference between males and females within the overall level of social-emotional health (rm=.219), close to being statistically significant (U=480.50, p=.065). There are small and medium effect size of the differences within dimensions between the group of males and the group of females. Both genders reached a medium level

of belief in self domain, but males (Mdn=26.86, IQR=5.00) scored higher compared to females (Mdn=23.29, IQR=7.00), medium effect size of the difference between the groups, a result has statistical significance (rm=.333, U=396.00, p=.005). Within the belief in others domain high level of social-emotional health were shown among both genders, females (Mdn=30.00, IQR=7.00) and males (Mdn=28.67, IQR=5.00), with a small effect size difference (rm=.104), not statistically significant (U=566.50, p=.382). Females showed high level of social-emotional health within emotional competencies (Mdn=27.86, IQR=7.00), males scored higher (Mdn=28.20, IQR=5.00) with a small effect size difference (rm=.097), not statistically significant (U=571.50, p=.414). Males showed high level of social-emotional health within the domain belief in others (Mdn=28.67, IQR=5.00) and emotional competencies (Mdn=28.20, IQR=5.00). For both domains, belief in self (Mdn=26.86, IQR=5.00) and engaged living (Mdn=26.33, IQR=7.50), males scored at the medium level of social-emotional health. Females showed the highest, high level of social-emotional health for the domain belief in others (Mdn=30.00, IQR=7.00). For the emotional competencies (Mdn=27.86, IQR=7.00), engaged living (Mdn=24.09, IQR=9.00) and belief in self (Mdn=23.29, IQR=7.00) females scored at the medium level of social-emotional health.

2.3 Regression analysis of social-emotional health and psychological well-being

The stepwise selection algorithm was used to choose the best subset of variables model between covitality and psychological well-being. Within the regression model, the covitality was determined as a dependent variable, and for predictors were chosen two variables: environmental mastering and positive relations with others. Based on the findings, we state that with the higher level of environmental mastering and positive relations with others the level of covitality increases. The regression model with two independent variables together explains 35% of variability of covitality. The level of overall social-emotional health increases with the increase in the mastery of the environment and positive relationships with others, which explains 35% of the data variance.

Table 4

Model Summary: Regression analysis with covitality as dependent variable

model	*R*	*R 2*	*R 2 adj*	*Std. Error of the Estimate*
1	.480 a	.231	.220	11.76
2	.592 b	.350	.331	10.89

a. Predictors: (constant) environmental mastering

b. Predictors: (constant) environmental mastering, positive relations with others

Table 5

Regression analysis with covitality as dependent variable

Model	*Unstandardized Coefficients*		*Standarized Coefficients*	*t*	*p*
	B	*Std.Error*	*Beta*		
Constant	82.550	5.149		16.031	.000
Environmental mastering	1.879	.413	.480	4.549	.000
Constant	66.369	6.611		10.039	.000
Environmental	1.465	.400	.375	3.664	.000
mastering	1.426	.403	.361	3.533	.001
Positive relations with others					

a. Dependent Variable: covitality

3 Discussion

The aim of the study was to determine the relationships between the social-emotional health and the psychological well-being among students of Church School. We found out that there is a strong positive relationship between covitality and psychological well-being (H1). The results of the present study are consistent with the findings of other authors (Furlong et al., 2013; Renshaw et al., 2014; Boman et al., 2017; Telef & Furlong, 2017). It can be stated that young people who have higher levels of social-emotional health could experience higher level of psychological well-being. The results of the present study further revealed that there is a strong positive relationship (VO1) between covitality and positive relations with others, and self-acceptance. It can be stated, that students with better relationships with others are of more self-acceptance and they are mentally healthier. The results further revealed moderately strong relationships between Covitality and environmental mastering as well as between Covitality and personal growth. Between covitality and autonomy, as well as covitality and purpose in life there have been shown week relations. The results are consistent with the findings of research of other authors Bomana et al. (2017).

There is a strong relationship between belief in others and positive relations with others. These results suggest that students who trust others tend to have better relationships. We found moderately strong relationships between emotional competencies and self-acceptance, between emotional competencies and personal growth, as well as between emotional competencies and environmental mastering. There are positive relationships between psychological indicators of social-emotional health and dimensions of psychological well-being. (VO2) The strong positive relationship has been revealed between the indicator of peer support and the dimension of positive relations with others. Moderately strong

relationships of positive relations with others were shown also among indicators of family support, gratitude and self-awareness. It can be believed that adolescents who receive family support, are grateful and self-aware, have better relationships with others. The results of the present study are partly consistent with the findings of the study of other authors (Gajdošová et al., 2018; Timofejová et al., 2016; Gálová & Veselková, 2012).

The results also revealed that there were moderately strong relationships between self-acceptance and cognitive reappraisal, between self-acceptance and self-regulation, as well as between self-acceptance and self-efficacy. According to the results of our study, young people who have a high level of self-acceptance are able to regulate their own emotions, are of higher self-control and self-efficacy.

Moderately strong relationships have been shown within the personal growth dimension, which is most related to self-regulation, self-efficacy and cognitive reappraisal.

As to environmental mastering, there have been shown moderately strong relationships with self-regulation, cognitive reappraisal, family support as well as self-efficacy. Within the dimension of autonomy, there have been week relationships shown only.

As to the domain belief in self males and females scored at the medium level of social-emotional health, the effect size difference between the higher level of male's and lower level of the female's group is medium and statistically significant (H2). As stated, females have significantly lower levels of belief in self compared to the opposite gender. The results showed a significant difference in the level of self-confidence in favor of males compared to females. These findings are consistent with the findings of other authors (Furlong, et al., 2014; Radnoti, 2016; Gajdošová et al., 2018), who pointed out at a higher level of belief in self among males.

Furthermore, the level of overall social-emotional health increases with the increase in the mastery of the environment and positive relationships with others, which explains 35% of the data variance (VO3).

Conclusion

However, the findings should be interpreted in the light of limits, which include the usage of non-standardized methods on Slovak population, low level of reliability for Psychological Well-being Scale, the time of data collection, which took place during the last class at the end of the week. Validation of internal consistency of both instruments could be considered as the key benefit of the research as well as our contribution to the standardization of SEHS-S questionnaire in Slovakia.

Acknowledgement
The contribution was created within the solution of the scientific project GA/1/2019 Social-emotional health of students as an important indicator of the quality of school, Grant Agency of Academia aurea, Ostrava, Czech Republic (2019-2021).

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Acta Educationis Generalis
Volume 11, 2021, Issue 2

Exploration of PYP Practitioner Preschool Teachers' Science Teaching Practices: The Effect of Pedagogical Beliefs

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DOI: 10.2478/atd-2021-0011

Received: August 11, 2020; received in revised form: October 22, 2020;
accepted: October 31, 2020

Abstract:
Introduction: The aim of this study was to investigate PYP practitioner preschool teachers' science teaching practices in terms of their pedagogical beliefs.
Methods: In this mixed method study, the quantitative data were first collected and analyzed, and then the qualitative data were collected and detailed. Accordingly, Pedagogical Belief Systems Scale (PBSS) was first implemented to 39 preschool teachers. Then, teachers were selected based on their scores from PBSS and included in the qualitative data processes. Data sources in this study are PBSS, Science Teaching Construction Task (STCT) and Classroom Observations. On the other hand, data analysis consisted of three steps. In the first step, quantitative data analysis was performed. Qualitative data analysis was performed in the second and third steps. In the first step of the qualitative data analysis, inductive content analysis was performed based on the constant comparative method on the responses of the teachers in the lower and upper groups to eight questions in STCT. Then, teachers' science teaching practices in their own classrooms were analyzed through analytic rubric and enriched with field notes
Results: The results revealed that PYP practitioner preschool teachers had child-centered pedagogical beliefs. They also performed science teaching activities based on question-answer and deliberative interactions representing child-centered orientation, independently of their pedagogical beliefs.
Discussion: According to the results in this study, the quality of PYP practitioner preschool teachers' theoretical orientations and practical applications for science teaching was independent of their pedagogical beliefs. However, preschool teachers with high pedagogical beliefs put more emphasis on inquiry in their theoretical conceptualizations about science teaching.

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Limitations: The most important limitation in this study is the population. The first limitation occurs because PYP practitioner preschool education institutions were very limited in Istanbul; PYP practitioner preschool teachers were difficult to reach. The second limitation is that this research relied on only teachers' self-reported views and practices.
Conclusion: Findings in this study is important in terms of describing the quality of preschool science teaching in the context of PYP and how teachers' pedagogical beliefs serve it. Hence, based on the results obtained in the study, it was revealed that PYP practitioner preschool teachers were generally based on child-centered teaching and tended to use inquiry-based pedagogical strategies.

Key words: preschool teacher, PYP, preschool science teaching, pedagogical beliefs.

Introduction

According to modern education programs, it has been argued that reasoning and inquiry skills start from early childhood (National Research Council [NRC], 2012). This emphasis indicates that preschool teachers can integrate children's life experiences into the classroom through questions, research and explanations for a qualified science teaching (NAEYC, 2009). Children's curiosity and enthusiasm to make the world a more predictable place encourage them to explore and make inferences with their experiences. However, preschool teachers have great jobs to provide the transformation of children's curiosity and activities into a scientific effort (Worth, 2010). Preschool science teaching activities involve all kinds of learning that students experience with their senses, and teachers are responsible for guiding this process. Therefore, preschool teachers should have pedagogical competencies with regard to the activities of asking questions, doing research and collecting data. Furthermore, teachers' tendencies, attitudes and pedagogical beliefs towards science teaching are also assumed to be important for a qualified science teaching (Lin, 2011). In this regard, the issue of belief should not be ignored in the investigations on teaching-learning processes. Pajares (1992) indicates that teachers' beliefs have a significant role in decision-making processes regarding the curriculum they will implement and their behaviour in the classroom. Therefore, it can be said that teachers' tendencies and pedagogical beliefs towards the teaching process determine the quality of teaching.

It is known that a significant portion of private schools in Turkey implement the existing curriculum and also turn to international programs in order to become more known at the local level. One of the major programs, that give importance to evaluations within the framework of international standards in terms of purpose, content, process and output, is the International Baccalaureate

Organization (IBO) programs. Primary Years Programme (PYP), which covers the education process between the ages of 3-12, is the program of IBO implemented within the scope of preschool education. The role of the teacher is important in the PYP program. Places where children can carry out the research, investigation and playing activities they need to know world are provided. Various resources are provided for literacy, art, skill-based activity, creative game, science and technology. Through PYP, children are supported to make choices, use materials creatively, make inquiries, work cooperatively, and gain the ability to continue and make sense of their interests (IBO, 2012). It can be argued that the implementation of these tasks by the teacher believingly will bring positive results. The principle that a purposeful and structured research is strong is at the center of the PYP philosophy. Therefore, PYP involves commitment to the concept-oriented curriculum that supports inquiry (Walker, 2004). One of the most important features of PYP is that it adopts an understanding that places the child at the center (Morrissey, Rouse, Doig, Chao, & Moss, 2014). The purpose of PYP is to create an interesting, relevant, challenging and compelling interdisciplinary curriculum. Students start the learning process with their prior knowledge they have acquired previously, and they learn this knowledge by composing it with the knowledge on the lines of the curriculum (IBO, 2012). In PYP, students plan their own inquiries by answering the question "What do I want to learn?" and they are invited to advance research, experiments, observations and analyses that will help responding and to investigate and analyze the topics of interest in order to reach the conclusion of the inquiry. This process meets the standards specified for an effective science teaching in the literature (Harlen, 2013; Worth, 2010). Based on this information, it can be said that preschool teachers who practice PYP use different strategies and follow certain stages while creating PYP unit and PYP questioning programs compared to other teacher groups. In parallel with it, it can be stated that PYP practitioner preschool teachers make step-by-step and strategic planning in research-inquiry and discovery-based practices while creating the student profile and explaining risk-taking strategies compared to the teachers of other programs.

Science education in early childhood

One of the strongest themes according to the standards set on the basis of modern education systems is that all children can learn science and all children have the opportunity to become scientifically literate (NRC, 2012). Young children are called innate scientists because of their innate curiosity. Children's curiosity and enthusiasm for learning lead them to explore the world and draw conclusions from their experience (Worth, 2010; Koutníková, 2017). Nevertheless, studies on scientific thoughts of young children have shown that young children have the ability to think scientifically and understand the scientific concepts (Eshach, 2006; Jones, Lake, & Lin, 2008). However,

although children collect information similarly to scientists, children should participate in scientific reasoning and teaching processes in order to further improve their thoughts about science (Gopnik, 2012). It is very important for learning outcomes to enrich science education with games, to make it more interesting through interactive learning and to adjust its complexity and difficulties according to age and stages of development. These processes indicate future education trends (Murray, 2019).

Therefore, a qualified science teaching should focus on phenomena as part of children's daily lives. Focusing on experiences or phenomena requires a child-centered and inquiry-based science teaching practice (Gustavsson & Pramling, 2014). In this process, child-child and teacher-child interactions should reach the highest level in order to achieve meaningful learning. In brief, early childhood science education should support children's understanding of the changes occurring in their immediate world through research and inquiry, which means that science practices are carried out by integrating natural phenomena with context-based experiences.

The teacher's role and pedagogical beliefs

Preschool science teaching includes the activities related to the structuring of scientific knowledge rather than the direct transfer of the conceptual content. Here, it is focused on children's discovery of scientific concepts (Duschl, Schweingruber, & Shouse, 2007). According to Tu and Hsiao (2008), the role of teachers in preschool science teaching is to develop play-based activities to support children's learning of science, to be involved in these activities socially and to ask questions in order to encourage critical thinking. Teachers' interactions with the children and the quality of the questions they ask facilitate the cognitive development of children. Research has demonstrated that teacher-child verbal interaction, especially asking questions, is a key component that leads to positive outcomes for cognitive level of children (Anderson & Gullberg, 2014; Toyama, 2016; Wood & Hedges, 2016). Good questions improve children's observation skills and problem-solving skills and encourage them to share their ideas. In order to achieve it, preschool teachers should have a child-centered orientation rather than absolute subject matter knowledge, which is therefore related to the fact that teachers integrate subject matter knowledge with their beliefs and pedagogical content knowledge (Fleer, 2009). Teachers' pedagogical beliefs express their teaching and learning approaches in the classroom (Liu, 2011; Khader, 2012). Teachers' pedagogical beliefs have an effect on their decisions in the stage of designing teaching (Hamlin & Wisneski, 2012; Duran & Mertol, 2020). Therefore, especially preschool teachers' opinions on how to achieve learning ideally during science teaching and the structure of teaching should be based on a solid pedagogical belief which also depends on the fact that teachers value science, ask thought-provoking questions and have a child-centered pedagogical orientation.

Significance of the study

In the studies on preschool science teaching, it has been reported that science knowledge of teachers is an important factor for qualified learning of children (Nihlfors 2008; Gitomer & Zisk, 2015). However, subject matter knowledge is not the only requirement. The studies also indicate that preschool teachers' pedagogical content knowledge and pedagogical orientation affect children's learning (Fleer, 2009; Thulin & Redfors, 2017). Sheridan et al. (2009) argued that the pedagogical awareness of preschool teachers is one of the most important predictors of qualified teaching. It has been revealed that teachers who are learning-oriented and child-centered design more qualified teaching. A child-centered and research-inquiry oriented science teaching approach put forward here is one of the most important features of PYP (Morrissey et al. 2014). When these features are considered, science teaching practices of PYP practitioner teachers are expected to be more child-centered (IBO, 2012). However, studies on preschool science teaching in which this expectation can be tested are quite limited in the available literature (e.g. Twigg, 2010). Furthermore, there is very limited empirical knowledge about how and to what extent a qualified science teaching activity within the context of preschool teacher education is affected by these knowledge domains. It has been reported in the studies that preschool teachers are inadequate in terms of science content knowledge, pedagogical strategies and experiences (Garbett, 2003; Thulin & Redfors, 2017). On the other hand, although there are theoretical conceptualizations about the interaction between pedagogical beliefs and science teaching practices in the literature, no empirical study was found. Based on all these rationales, how PYP practitioner preschool teachers' pedagogical beliefs on learning and teaching affect their science teaching practices was investigated in this study.

1 Methodology

This study is a mix type research that contains qualitative and quantitative research methods together. The main hypothesis of this approach is the use of qualitative and quantitative research approaches by combining their various elements for broad and deep understanding and verification purposes (Creswell & Plano-Clark, 2017). Thus, both data triangulation (Fielding, 2012) that increases the credibility of the research results and the principle of complementarity (Giannakaki, 2005) which represents rich and detailed data by measuring the investigated problems from different perspectives were implemented. Furthermore, the strategies proposed by Lincoln and Guba (1985) were implemented to ensure the validity and reliability of qualitative data. Accordingly, the researcher who was actively involved in the data collection process from the beginning to the end, he works in a school that implements PYP. Thus, he collected deep focused data from the participants with whom he interacted for a long time through interviews and observations. Furthermore, the expert opinion consulted was during the application of qualitative data collection

tools used in this study and data analysis. Finally, the transferability criteria were fulfilled by describing the results reached in detail through direct quotations.
In this study, the quantitative data were first collected and analyzed, and then the qualitative data were collected and detailed. This type of research is called sequential transformation design (Creswell & Plano-Clark, 2017). Accordingly, firstly, quantitative data from PYP practitioner preschool teachers were collected and analyzed through PBSS. Then, lesson plan interviews were conducted with the teachers selected according to their scale scores, and their classroom teaching was observed.

1.1 Participants

This study was conducted with the participation of 39 preschool teachers working in preschool education institutions affiliated to the Ministry of National Education (MoNE) in the 2019-2020 academic year in Istanbul. The participants were selected by the criterion sampling method, one of purposeful sampling methods. The main purpose in criterion sampling is that the participants represent a predetermined profile (Patton, 2014). The criteria mentioned in this study were the fact that teachers had different seniority, were PYP practitioners, had performed PYP teaching for at least one year, and had at least three years of professional experience. Based on these criteria, PBSS was first implemented to 39 teachers selected from five different private preschool education institutions. Then, teachers were selected based on their scores from PBSS and included in the qualitative data processes.

1.1.1 Determination of sub-samples

PYP practitioner preschool teachers who participated in the study were divided into two subgroups (upper and lower) based on their scores from PBSS. Among the participants selected according to deviant case sampling, which is one of the purposeful sampling methods, those in the lower group represented teacher-centered belief systems and those in the upper group represented child-centered belief systems. The paths followed in determining the sub-samples are as follows:

1. PBSS was first implemented to 39 PYP practitioner preschool teachers.
2. Two formulas were used by determining the average and standard deviations of the scores obtained from PBSS (Fraenkel, Wallen, & Hyun, 2006).

   Arithmetic mean + Standard Deviation / 2 < UPPER GROUP
   Arithmetic mean - Standard Deviation / 2 > LOWER GROUP

In this way, a total of four participants were selected from the lower and upper groups representing at least 10% of the total participants, and the qualitative processes were carried out with the participation of these teachers (Sandelowski, 1995). Information about the participants is presented in Table 1.

Table 1

Participant features

*Teacher**	*School Type*	*Level of Children*	*Age*	*Professional Experience*	*PYP Experience*	*PBSS Score*
T_{upper1}	Private School	60-72 months	32	10 years	2 years	109
T_{upper2}	Private School	36-48 months	37	14 years	2 years	104
T_{lower1}	Private School	48-60 months	39	16 years	2 years	77
T_{lower1}	Private School	60-72 months	43	23 years	2 years	71

* Teachers were given a pseudonym for this study.

All preschool teachers aged between 32 and 43 years were women. Furthermore, it is observed that all of the participants with different professional experience in preschool education had two years of PYP experience. The schools where the participants work are located in the European side of Istanbul, a metropolitan city of Turkey. All schools have a wide range of instructional and technological opportunities, and the infrastructures of the schools support reform-based initiatives in terms of the instruction in which students are included.

1.2 Data collection

The data collection tools used in this study were Pedagogical Belief Systems Scale (PBSS), Science Teaching Construction Task (STCT) and Classroom Observations. The data collection process lasted for a total of six weeks. At first, PBSS was directed to all participants. Then, semi-structured interviews accompanied by STCT were conducted with the participants who were in the lower and upper groups according to their pedagogical beliefs. The statements of teachers, who answered the questions in the form, were recorded with a voice recorder in order to obtain the data more properly. It took approximately 50-60 minutes for each teacher to respond to the STCT. Finally, the teachings of preschool teachers, who filled out the lesson plan, in their classrooms were observed. The courses lasted for approximately 20-51 minutes. The researchers did not interfere with teaching during the observations. The observations were also supported by field notes. Data collection tools are presented in detail below.

1.2.1 Pedagogical Belief Systems Scale (PBSS)

PBSS, which was developed by Chan, Tan and Khoo (2007) and adapted to Turkish Soysal, Radmard, & Kutluca (2018) by performing its validity and reliability, was used to determine participants' pedagogical beliefs on learning and teaching. While high total scores obtained from this five-point Likert scale consisting of a total of 26 items, indicate that preschool teachers have a tendency towards a more child-centered belief system; lower scores reveal that the tendencies of the pedagogical belief system are more teacher-centered. The

lowest and highest scores that can be obtained from the scale, which is scored between 1-5, are 26 and 130, respectively. The mean value for this scale is 78.

1.2.2 Science Teaching Construction Task (STCT)

Based on the rationale that teacher knowledge was complex (Loughran, Mulhall, & Berry, 2004) and therefore could not be determined with a single tool (Baxter & Lederman, 1999), the theoretical aspect of PYP practitioner preschool teachers' instructional practices about science teaching was first determined. For this purpose, the STCT, which was developed by Loughran et al. (2004) and adapted to the Turkish context by Soysal and Radmard (2018), was used. Accordingly, STCT reflects a detailed science teaching content based on the recognition of 'big ideas' for any subject mapped against pedagogical demands. This form consists of eight questions that allow preschool teachers who practice PYP to direct their classroom design *practices, implementation and reflection*. Expert opinion was received from two faculty members who are experts in preschool science teaching and qualitative study in order to ensure the internal validity of the interview questions in the STCT, which was adapted to the preschool education context. After making the corrections from expert opinions, a pilot application was performed with a preschool teacher with 14 years of experience who was not included in participating teachers in order to determine the clarity and comprehensibility of the questions in the interview protocol and whether the study served its purpose. The forms containing the answers obtained from this application were sent to the experts again and the interview protocol was finalized after the feedback received. The characteristics of the questions are detailed in Table 2.

Table 2

STCT characteristics

Question	*Characteristics*
Q-1	The purpose or orientation of the teacher to teach a particular subject.
Q-2	The orientation of the teacher about why the topic that the children want to learn is important.
Q-3	The orientation of the teacher on advanced and different knowledge bases that children should not learn yet.
Q-4	Teacher's orientation regarding the teaching process regarding difficulties, limitations and disabilities.
Q-5	The orientation of the teacher about child concepts that affect teaching on a particular subject.
Q-6	The orientation of the teacher on teaching approaches, strategies and techniques related to a particular subject.
Q-7	Strategies offered by the teacher to identify children's understanding and confusion about the topic taught.
Q-8	Teacher's orientation towards academic or non-academic teaching approaches and subject area knowledge resources.

A teacher who responds to STCT according to what is given in Table 2 details the basic contents below:

- What children should learn about each big idea;
- Why it is important for children to know these ideas;
- How possible learning difficulties of children and the relevant concepts comply with the teacher's knowledge about the content.

In brief, STCT was designed to reveal teachers' teaching knowledge about a specific science subject matter.

1.2.3 Classroom observations

Classroom observations were conducted to obtain more perceptible and traceable knowledge about the PCKs of preschool teachers included in the study. In this way, it was aimed to better understand teachers' processes of realizing this knowledge and the context they taught (Park & Oliver, 2008). Classroom observations were conducted using the observation protocol developed by Newton, Driver and Osborne (1999). According to this protocol, classroom observations are generally conducted by following three basic frameworks. These frameworks are activities involving students (PA), how they are grouped during the activities (PWG), and teacher-student interaction styles (P&TI). In accordance with the objectives stated here, what teachers and students did during the courses and at which moment (at one-minute time intervals) of the courses they did them were determined.

1.3 Data analysis

The analysis of the data consisted of three steps. In the first step, participants' responses to the PBSS were analyzed through descriptive statistics. In this way, both the pedagogical orientations of all participants and the members of the lower and upper groups were determined. In the second step, inductive content analysis was performed based on the constant comparative method on the responses of the participants in the lower and upper groups to STCT (Patton, 2014). This method, in which the qualitative data collected to better understand any phenomenon are evaluated systematically and objectively according to concepts and themes from an inductive perspective, includes the stages of open coding, creating categories and abstracting (Myring, 2015). Accordingly, first of all, participants' responses to each question in the STCT at the beginning and end of the process were subcategorized, and a coding framework was created. The coding framework was created by complying with the constant comparative method, which includes the stages such as *creating concepts, determining the boundaries of themes, assigning concepts to appropriate themes* and *summarizing the content of each theme*. Here, it is aimed to *distinguish conceptual similarities, to develop the distinctive power of themes* and *to explore the patterns* (Strauss & Corbin, 1994). The coding framework was established

by two experts, by discussing how to determine the appropriate concepts and themes for each question. The experts separately evaluated a limited part of the data set. The intercoder reliability percentage was achieved by comparing the analyses performed at different times and places (Miles & Huberman, 1994). This value, which was 91%, indicated that the analyses were proceeding reliably (Lincoln & Guba, 1985). Finally, all analyses were sent to a different expert, opinions were received for external control and the process was completed (Creswell & Plano-Clark, 2017). The third step consisted of the analysis of classroom observations. In the analysis process performed by using the rubric developed by Newton et al. (1999), time charts were made for the instructional application of each participant according to the activities under PA, PWG and P&TI. One more expert also participated in the analyses in order to ensure the reliability of evaluations. The rubric was first introduced to the relevant expert and a framework was created by performing theory-laden negotiations for each activity. For instance, "discussion interaction" under the P&TI category represents discourse sections where teachers and students enter into a wider or deeper discussion about a question or issue. Then, one of the observations recorded on the video was analyzed at different times and places according to the previously determined framework. The inter-coder reliability rate for these analyses was 85%. After the discussions, the analyses performed on the remaining videos were sent to the same expert for external control purposes, and the final opinions were received and the analyses were completed.

2 Results

In this part of the study, the results obtained from quantitative and qualitative data analyses are presented. Firstly, descriptive statistics values given in Table 3 include information on the level of pedagogical beliefs of participating teachers.

Table 3

Descriptive statistics of PBSS scores

	N	*Minimum*	*Maximum*	$\bar{X}$	*Standard Deviation*
PBSS Score	39	71.00	109.00	87.6	7.43

Accordingly, participants' mean score of the PBSS was $\bar{X}_{total}$=87.6. The minimum value for the mean total scores was $\bar{X}_{min}$=71, the maximum value was $\bar{X}_{max}$=109. These results revealed that the pedagogical beliefs of the participants were higher than the expected mean value of 78. Therefore, it can be said that PYP practitioner preschool teachers generally had a child-centered pedagogical beliefs. However, there were also teachers with teacher-centered beliefs within the teacher group. Therefore, the lesson plans created by two participants who obtained the highest and lowest scores from the PBSS were first evaluated to

how teachers' science teaching practices changed according to their pedagogical beliefs. Then, the results on classroom observations were presented.

2.1 Theoretical change of instructional content

After the inductive content analysis performed on the responses to STCT, it was observed that teachers in the upper group answered the question regarding the purpose or orientation of the teacher to teach a particular subject with a content and inquiry perspective, however, the teachers in the lower group focused only on content.

"Tupper1: Interpreting the given images and start questioning. Establishing connections with the images. Reaching the concept of 'Water' and 'motion energy' from energy sources. Providing information about which learner profile characteristics we need while interpreting/questioning the images."
"Tlower1: What do we do to be healthy? The ways of protection from disease. The importance of hand washing (soap usage) When should we wash our hands? We have to eat enough. Toilet hygiene…
When preschool teachers' answers specific to their orientation towards why science content that children want to learn is important were examined, it was observed that both groups had similar objectives."
"Tupper1: To start the subject by inquiry plays a significant role in determining learning needs. The fact that they return to their past experiences, remember what they have learned and establish connections makes them move towards being a "subject". Furthermore, they become conscious of the use of energy resources. It will be more comfortable for them to establish connections with daily life in the activity performed."
"Tlower2: In order to continue life in the world, to ensure the continuity of the energy we need, to protect our natural energy resources, to increase energy savings, to become conscious consumers, to raise awareness…"

The answers specific to the second question asked about the purpose and objectives of science content given to children while implementing PYP revealed that all participants answering this question referred to the rationale of citizen and character education. Accordingly, it was observed that the teacher in the upper group using science content for energy subject mentioned the subjects of questioning, awareness raising and preparing for life. However, the teacher in the lower group also mentioned the importance of raising awareness and preparing for life. This result indicated that the goals and objectives of teaching developed independently of pedagogical beliefs. When the answers to the third question related to advanced and different knowledge bases that children should not learn yet were examined, it was determined that the teachers in the upper group mentioned the basic content structure based on the rationale of children's

levels of development. It was revealed that the teachers in the lower group naively mentioned the content structure in this regard.

"Tupper2: The cell structure of the seed used during plant germination should be known by the teacher. Because students' inquiries that will require a brief explanation about this subject may need to be answered specific to their level of development. Furthermore, chlorophyll in plants, especially CO2 they emit around at night and photosynthesis are other knowledge that should be known by the teacher."
"Tlower2: Hand washing and high body resistance is the main ways of protection from unknown flu viruses that have emerged recently. In this sense, hygiene and adequate nutrition are important for children."
The fourth question answered by the teachers in the lower and upper groups represented their orientation with regard to difficulties, limitations and barriers related to the teaching process. In this question, teachers talked about child and material-related limitations similarly to each other.
"Tupper1: The fact that the images shown are limited may limit the questioning. It may be difficult to remember their past experiences. They may have no past experiences about the concept of energy and energy resources."
"Tlower1: Students' indifference in the subject. Thinking that they know what is being told. Interruption of internet access of the digital tools used. Failure of a digital tool to work. Students' difficulty in choosing a center. Lack of material. Students' difficulty in producing ideas."

According to the answers to the fifth question asked about preschool teachers' understanding of children affecting teaching about a specific science content, it was observed that the teachers in the upper group referred to content experience, while the teachers in the lower group referred to the student interest themes with content experience.

"Tupper2: In general, I prefer a very basic level of lecturing. In general, I consider that they are aware that a plant comes from seed and grows in soil. Mainly demanding clear and precise answers may limit me to some extent."
"Tlower1: There is a presentation expanding with the question What is a microbe? I can switch from the defense systems of our body to the defense system of animals by using the children's knowledge and experience. I introduce professions based on the idea that we go to the doctor when we become ill."

Teachers' explanations about the fifth question showed that there was an orientation based on students' knowledge and children's experiences about the content presented. Accordingly, it can be said that PYP practitioner preschool teachers' conceptualizations about students' understanding and misconceptions developed independently of pedagogical beliefs. In the sixth question

representing the teacher's orientation towards teaching approaches, strategies and techniques related to a particular subject, it was determined that all of the participants referred to child-centered strategies, although they were different from each other.

"Tupper2: I usually try to carry out a problem solving process while teaching the subject. I aim for them to produce solutions to the problems they face by asking lots of questions and to recall their prior knowledge. I pay attention to make them establish certain connections with regard to their own lives."
"Tlower2: I use Web 2.0 tools in accordance with the blended learning and reverse instruction approaches within the scope of digital leader breakthrough. I pay attention to differentiated education."

Similar results were also found in the seventh question regarding what and how the preschool teachers who participate in the study would measure within the context of science teaching. Accordingly, it was observed that preschool teachers presented child-centered strategies aimed at determining children's understanding and confusion about the subject taught and tended to use alternative data collection tools.

"Tupper1: The illustration activity performed at the end of the activity. The evaluation criteria will be shared with children during the activity. The fact that each child describes his/her drawing helps to determine where they are."
"Tlower1: A concept map can be created. Apart from it, I expect the children to turn it into a change in behaviors in the long term."

The last question in the STCT represents preschool teachers' orientation towards academic or non-academic teaching approaches and sources of subject matter knowledge. In this question which is capable of expanding the scope of the other seven questions, it is remarkable that preschool teachers in the lower and upper groups also referred to similar themes.

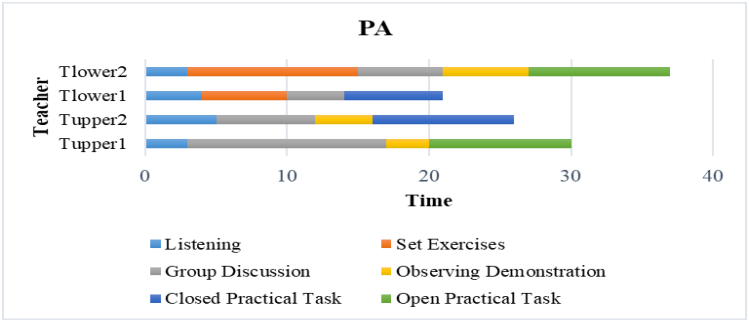
"Tupper2: I find it right to read and internalize scientific data on the subject while preparing for the lesson. If I am fully equipped with the knowledge I will teach as a teacher, I can make the necessary explanations more accurately and fluently during the student's inquiry and also share the scientific data to meet the student's needs. Furthermore, I also follow the accounts of official institutions and organizations about the subject over the internet."
"Tlower2: I attended digital leaders' education. I received a certificate. Eco schools' energy book. Sample blended learning classroom practices. Podlet, Edpuzzle, Google Drive, Active table, Wooclap, flipglip, blog posts…"

As can be seen from the sample explanations, the teachers in the upper group referred to the teacher competence theme by stating that they prepared for the lesson to increase their own subject matter knowledge, and the teachers in the lower group referred to the teacher competence theme by emphasizing that they participated in certificate programs. On the other hand, it was also found that preschool teachers tended to use secondary resources.

2.2 Practical change of instructional content

The observation results obtained by the analysis of courses based on science teachings conducted by PYP practitioner preschool teachers in their own classrooms are presented through Figure 1. Accordingly, teachers' classroom instructional practices were explained by time charts according to the activities within the framework of PA, P&TI and PWG. Furthermore, the observation notes about science teaching conducted all teachers in their own classrooms were also shared.

Figure 1 presents a general profile of the classroom instructional practices of teachers with two years of PYP experiences in preschool education in the lower and upper groups. Accordingly, it is observed that teachers included children in the question-answer and deliberative interaction processes in small groups and large groups independently of their levels of pedagogical beliefs. Another important result is that teachers followed in-depth questioning activity independently of their levels of pedagogical beliefs (Chen, Hand, & Norton-Meier, 2017). On the other hand, it is observed that teachers generally tended to include children in Group Discussion, which is a discourse-based dialogic form of interaction. For instance, the teacher in the upper group, who conducted science teaching about the development of living things, started teaching by posing a question to the children and conducted the deliberative interaction processes with the probe questions he asked to different children.



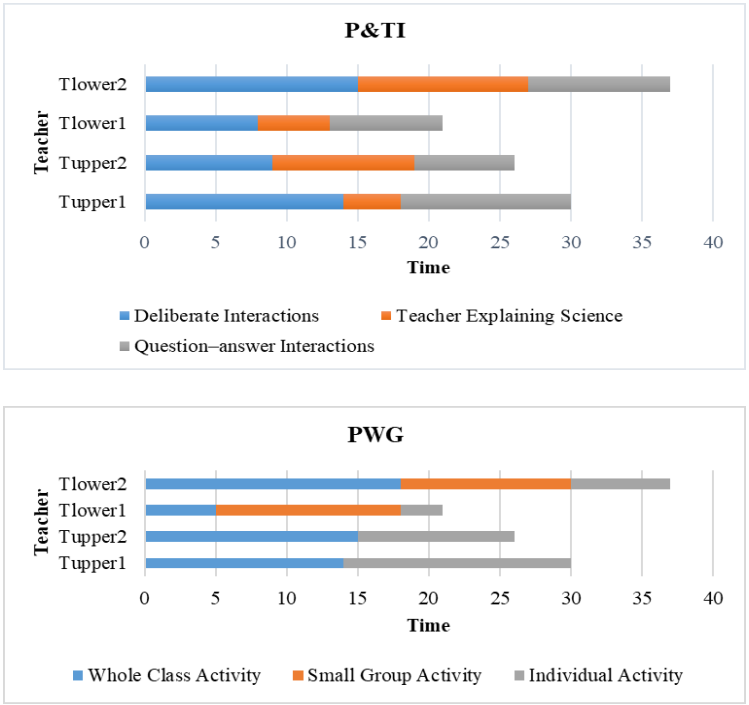


Figure 1. Classroom observations.

When the differences between the activities, in which the preschool teachers in the lower and upper groups included children, were examined, the participants in the lower groups mainly performed group works with the children. Another remarkable result in Figure 1 is that children were included in question-answer activities through sample pictures, videos and research findings, independently of a predetermined methodology. In this type of dual activity called "Un-structured activity" and "Question-answer interaction", teachers included their students in question-answer activities through a question accompanied by an image or video. Therefore, it was revealed that there was no noticeable difference in terms of the main types of activities in which children were included by preschool teachers who practiced PYP in the lower and upper groups during science education.

When classroom instructional practices of preschool teachers in the lower and upper groups according to their pedagogical beliefs were considered in terms of the discursive interactions between students and teachers, the same similarities attracted the attention. It is observed that teachers mostly focused on question-answer and deliberative interactions. For instance, the teacher in the lower group, who performed science teaching about the functioning of the world, started the course with a question-answer interaction, employed the deliberative

interaction processes and ultimately made children to perform individual experiment activity that allows children to use the knowledge they have gained. Furthermore, it was determined that all teachers interacted with children and provided individual feedback.

Finally, when the results in Figure 1 are considered in terms of the social environment for the main activity children are engaged in, it is observed that the preschool teachers in the upper group included children only in individual and all classroom activities; however, the teachers in the lower group used all types of activities at different moments of teaching. It can be said that preschool teachers with more professional experience tended to enrich the social environment independently of their pedagogical beliefs. In brief, it can be said that the teaching practices of preschool teachers with equal experience in PYP developed independently of pedagogical beliefs.

3 Discussion

In this study, PYP practitioner preschool teachers' theoretical orientation towards science teaching and how their practical applications changed according to their pedagogical beliefs were investigated. According to the results obtained after quantitative and qualitative data analyses, it was revealed that PYP practitioner preschool teachers who participated in this study had child-centered pedagogical beliefs. This result meets preschool science teaching standards (NAEYC, 2009; Harlen, 2013). Accordingly, it is important that science education is performed not only for informational purposes for scientific concepts, but also with play-based and child-centered pedagogical strategies (Gustavsson & Pramling, 2014). Therefore, all teachers should design and implement qualified science teaching activities independently of their pedagogical beliefs (Maier, Greenfield, & Bulotsky-Shearer, 2013; Oppermann, Brunner, & Anders, 2019). According to the results in this study, the quality of PYP practitioner preschool teachers' theoretical orientations and practical applications for science teaching was independent of their pedagogical beliefs. However, preschool teachers with high pedagogical beliefs put more emphasis on inquiry in their theoretical conceptualizations about science teaching. The role of inquiry is at the forefront in PYP which is an international program (Walker, 2004; IBO, 2012). Here, teachers should design activities that will encourage children's active participation in research and inquiry processes. This approach is consistent with NSTA's (2014) position advocating the integration of inquiry-based content and practices into preschool science teaching. In the literature, many researchers have argued that child-child and teacher-child interaction should be at the highest level and that teachers should ask thought-provoking questions, so that meaningful learning occurs (e.g. Castle, 2012; Toyama, 2016; Wood & Hedges, 2016). Researchers also agree that preschool teachers with child-centered pedagogical orientation will have the possibility that they can do it more easily

(Fleer, 2009; Khader, 2012). Therefore, the results of this study are compatible with the consensus in the literature.

As it was mentioned before, there is very limited empirical information on preschool teachers' pedagogical orientation and practices within the context of both PYP and science teaching. However, the main point that the literature agrees is preschool teachers' use of child-centered and play-based instructional strategies during science teaching (Tu & Hsiao, 2008; Fleer, Gomes, & March, 2014). The purpose of the PYP is to ensure that children use what they learn in the classroom in order to create some kind of action that will improve their local or global community (IBO, 2012; Morrissey et al. 2014). The fact that PYP practitioner preschool teachers who participated in this study encouraged students to establish connections with daily life through the activities they performed supports the specified position. PYP practitioner preschool teachers who participated in this study referred to child-centered strategies and alternative measurement and evaluation processes, independently of their pedagogical beliefs. This result also meets the current standards for preschool science teaching. Furthermore, it was observed that the teachers in the lower and upper groups reflected these theoretical orientations to their classroom practices and performed individualized activities to support the functioning, learning and thinking of children in the areas of cognitive, social, physical and emotional development. It was observed that teachers explained this situation independently of their pedagogical beliefs by referring to the concept of teacher efficacy. The available literature has revealed that there is a mutual relationship between teachers' pedagogical practices and self-efficacy (Gerde, Pierce, Lee, & Van Egeren, 2018; Opperman et al., 2019). PYP practitioner preschool teachers who participated in this study were aware that they had to develop their competencies in order to perform a qualified science teaching, which confirms Sheridan et al.'s (2009) claim. Accordingly, one of the most important predictors of qualified science education is pedagogical awareness. It is assumed that teachers with high pedagogical awareness think with learning-oriented and child-centered aspects and tend to design and implement qualified teaching. In this study, PYP practitioner preschool teachers performed science teaching activities based on question-answer and deliberative interactions representing child-centered orientation, independently of their pedagogical beliefs. In brief, the results obtained in this study provide sample ideas about how preschool science teaching should be. Furthermore, the results also revealed the contributions of the PYP context to qualified science teaching.

Conclusion and recommendations

This study is important in terms of describing the quality of a preschool science teaching in the context of PYP and how teachers' pedagogical beliefs serve it. Based on the results obtained in the study, it was revealed that PYP practitioner preschool teachers were generally based on child-centered teaching and tended

to use inquiry-based pedagogical strategies. Based the discussion of these results on the basis of the available literature although it is limited, the following recommendations can be made:

1. In-service training programs in which inquiry-based pedagogical strategies are discussed for a qualified science education in preschool education can be designed.
2. Studies with higher participation can be conducted for the evaluation of PYP in terms of preschool science teaching standards.
3. Studies in which PYP can be evaluated from multi-perspectives through the eyes of children at different developmental levels within the context of preschool science teaching can be conducted.
4. Studies that will enable the comparison of PYP with different programs within the context of preschool science teaching can be conducted.

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Acta Educationis Generalis
Volume 11, 2021, Issue 2

Effect of Online Learning on Transfer Student Success

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DOI: 10.2478/atd-2021-0012

Received: May 25, 2020; received in revised form: June 26, 2020;
accepted: June 30, 2020

Abstract:
Introduction: Online learning increased rapidly during the 2020 school year due to COVID-19. While online learning was perhaps the only realistic response to the health crisis, students differ in terms of their success with online learning. One particular group which may be vulnerable to problems with online learning is transfer students. Transfer students may be coming from smaller, in-person classes and are now put into fully online environments. This paper studies the performance of transfer students in online classes versus in-person classes.
Methods: This study compares the success of transfer students for an in-person semester to an online semester. A simple statistical test was performed to compare results for transfer students to control students.
Results: Transfer students appear to be performing worse than control students in the fully online learning environment.
Discussion: There may be a variety of reasons for the poorer performance of transfer students. They may be switching from smaller, in-person learning environments to more impersonal online environments.
Limitations: Pre-existing differences in individual students could not be controlled for.
Conclusion: These results suggest that transfer students may not be adapting to fully online learning as well as control students. Further research is needed to clarify this.

Key words: online learning, transfer students, economics.

Introduction

With the spread of COVID-19 in 2020, most Universities shifted to fully online learning. This shift will have a variety of different effects, which will take many years to explore fully. One potential area of interest is its impact on transfer students. This study will empirically compare the performance of transfer students before and after the change to online learning. The study explores some

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of the switch's implications and the social environment on campus during the pandemic.

School transfers are by all accounts becoming more common in the COVID-19 era. There are a few reasons for this. Many students are now unable to attend the school of their choice and prefer to stay closer to home. Travel now increases health risks, and so this plays a factor as well.

However, not all of the changes for transfer students are negative from their perspective. With fewer out-of-state enrollments and a far smaller number of international students entering the country, some institutions are less picky in accepting transfer students than they used to be. The result is that some institutions are more motivated to enroll new students.

A recent Inside Higher Ed survey found that 9 in 10 college enrollment officers were either very concerned or somewhat concerned about enrollment numbers this past fall. Therefore, the same poll found that 78% of colleges were looking to actively increase the number of transfer students they recruit for the Fall 2020 semester (Lederman, 2020).

The author is employed at a large Southern U.S. University that typically accepts many transfer students. The author typically teaches several large sections of Managerial Economics, a junior-level course. The author has previously found that transfer students usually perform as well as students who started at the university as freshmen. According to the Higher Ed Survey, most administrators agree with this assessment (Lederman, 2020).

However, the onset of Covid-19 shifts the playing field in numerous ways. With the movement to online learning, many elements in the learning environment have changed. The terms for acceptance have changed, and so has the social and pedagogical setting. Faculty may have to provide additional leadership to provide all students with the opportunity for academic success (Žydžiūnaitė, 2018).

The new environment has also changed the playing field in regard to transfer students specifically. As we have discussed, it allows students who may previously have had difficulty gaining acceptance into the institution a chance to enroll. If the student pool has changed significantly, the same may be true for their academic performance.

Therefore, the author wanted to test whether transfer students are still performing and continuing students in an online environment.

If results are unequal, it may suggest transfer students have additional academic needs in a fully online environment. To provide students with the help they need, we must analyze COVID-19 related data quickly and draw meaningful policy conclusions shortly. This study aims to assist with that goal.

1 Literature review

We do not yet have a significant amount of study on the influence of COVID-19 on students' performance, whether transfer or otherwise. However, there is already some high-quality research on the topic. One study has reached the counterintuitive conclusion that students fare better during the COVID-19 lockdowns than they did before (Gonzalez & de la Rubia, 2020).

However, we can contrast this with the way students perceive their experience of the pandemic. Almost all students report higher levels of anxiety, stress, and depression. Also, most believe that they perform more poorly in the academic field, even when this is not empirically borne out (Aristovnik et al., 2020).

Therefore, the overall trend of the limited literature on the topic of student performance during the pandemic paints a picture of lower mental health but not necessarily lower performance. These surprising findings can be explained by the surplus of time students now have to study and focus on their education. Many students are also unemployed or forced to work less, and therefore have more time to learn (Aucejo et al., 2020). This brings academic self-discipline into play, which has been shown to affect transfer and retention (Allen et al., 2008).

However, as always, socioeconomic differences and race play a significant role in the performance of students, and this may be especially the case for transfer students (Graham & Hughes, 1994). The lockdown seems to have hurt students with limited economic means in several unfortunate ways. One study shows that students from more affluent families can study 4 hours more a week on average than before the pandemic's influence. Meanwhile, families with fewer means have had to cut study time by 5 hours on average (Gonzalez & de la Rubia, 2020). It would be no surprise if these differences had a detrimental influence on academic performance.

While we are in the early stages of researching the influence of COVID-19 on students, there is a large amount of literature on transfer students' academic performance in general. Some studies show that transfer students initially suffer from 'transfer shock' and suffer lower grades (Glass & Harrington, 2002). Other research shows the importance of social on-campus connections for incoming transfer students, which of course would be weakened by fully online learning (Townsend & Wilson, 2009).

However, not all studies find significant 'transfer shock.' Some studies have even shown a temporary increase in grades. The term 'transfer ecstasy' has been coined to capture this phenomenon (Laanan, 2001). In fact, they reliably attain significantly higher grades in some disciplines than they did in their previous schools. However, business students do achieve lower grades on average upon transferring (Cejda, 1997). Therefore, there is reason to believe that the students taking part in this study may perform at a lower level than their equivalents in other fields.

Duggan and Pickering (2008) showed that barriers to success depended on the student's level (freshman, sophomore, junior/senior). The further along students are when they transfer, the more likely they are to stay and graduate and get good grades (House, 1989). Retention is significantly higher when students move from a community college to a 4-year university after completing their Associate of Arts degree (Best, 1993). Indeed, most researchers in the field agree that community college transfers can succeed in 4-year universities but only if they have high GPA's and have qualified for an Associate's degree (Best, 1993; Duggan & Pickering 2008; Glass & Harrington 2002; Zhai & Newcomb, 2000). These findings are very well-known, and schools take them into account when admitting students from community colleges.

These facts lead to some unintentional preference for more affluent community college students and discrimination against minorities. Socioeconomic and racial factors play a significant role in determining who transfers, where they transfer to, and how they fare once they get there. The students who manage to transfer from community colleges are often of higher socioeconomic status than the school's average student. Also, minorities are often underrepresented among transfers (Goldrick-Rab & Pfeffer, 2009).

If so, the overall assumptions of the existing literature are that transfer student will do roughly as well as their continuing equivalents. While there may be some 'transfer shock,' it is expected to wear off soon. In terms of COVID-19, the small amount of research done suggests that while students suffer mentally and socially, their academic performance has improved during the pandemic.

Income levels, which may defer between transfer students and continuing students, can have a critical impact on academic success as well. COVID-19 may have exacerbated income differentials among students. Research shows lower-income levels has negatively affected student learning during COVID-19 (Rodríguez-Planas, 2021). However, a different study shows no difference in midterm grades among transfer students (Selsby & Bundy, 2021). Another recent study shows no negative effect of COVID-19 on low-income, first-generation college students (Engelhardt, Johnson, & Meder, 2021).

2 Analysis

The research questions ask whether transfer students will be as successful as continuing students for regular, in-person classes and fully online classes. Therefore, the formal hypothesis for this study is as follows.

Hypothesis H0: Transfer students will perform as well as continuing students in the Managerial Economics class in both in-person classes and fully online classes.

During Spring 2020, the author's university switched to fully online learning during the middle of the semester. Therefore, this semester would not be appropriate to test. By Fall 2020, the university informed students in advance

that the course they were registering for would be 100% online for the entire semester. The Fall 2020 semester then serves as the test condition.
The control condition will be the Fall 2019 semester. During each semester, the author taught three large sections (total ~ 300 students) each semester. Lecturers taught the Fall 2019 semester in-person two days per week. Meanwhile, staff taught the Fall 2020 semester two days per week but entirely online.
There was no apparent difference in student characteristics from the Fall 2019 semester group to the Fall 2020 semester group. Therefore, this analysis focuses on any differences between transfer and continuing students when switching to a fully online environment. This could be thought of as an exploratory study, as potential differences in student populations were not controlled for directly.

3 Results

The summary statistics are presented in Table 1 below. The results are pooled for three sections taught each semester.
The Fall 2019 sections were taught in-person, while the Fall 2020 sections were taught entirely online.

Table 1

Summary statistics

Student Type	*Fall 2019 – Number of Students*	*Fall 2019 – Final Course Average*	*Fall 2020 – Number of Students*	*Fall 2020 – Final Course Average*
Continuing	216	85.62	214	86.43
Transfer	90	85.23	83	81.27

The results show a clear difference between the outcomes for the Fall 2020 semester.
Two separate regression analyses were then performed. The first regression tested whether there was a difference in outcomes for the Fall 2019 semester by student type. The second regression was conducted in the same way for the Fall 2020 semester.
A dummy variable was used to represent Transfer versus Continuing status. The results are presented below in Table 2 and Table 3.

Table 2

Fall 2019 results

	Coefficients	*Standard Error*	*t Stat*
Intercept	85.73	0.67	94.71
Transfer (Transfer = 1, Continuing = 0)	-0.39	1.62	-0.90

For the Fall 2019 data, the Transfer variable is not significant. There is no significant difference between the outcomes of continuing students and transfer students.

Table 3

Fall 2020 results

	Coefficients	*Standard Error*	*t Stat*
Intercept	86.42	0.94	91.18
Transfer (Transfer = 1, Continuing = 0)	-5.19	1.78	-2.90

For the Fall 2020 data, the Transfer variable is statistically significant. This data shows a substantial difference between the outcomes of continuing students and transfer students. This simple test is to be interpreted as a starting point for future analysis. There appears to lower performance by transfer students with the switch to a fully online learning environment. Potential reasons for this are discussed below.

4 Discussion

The data show that transfer students are not performing as well as they have in the past. The results imply that they are experiencing a more difficult adjustment to COVID-19 than their continuing student peers. While this finding does not necessarily negate results that students perform better academically during the pandemic, it shows us that we should treat these findings with caution. Some students may be doing better, but who and why?

One potential explanation for the difference between Fall 2019 and Fall 2020 is that 4-year universities in 2020 could not be as selective as they once were. With schools showing a willingness to enroll students they may have rejected before, this may lead to lower performance levels.

In the past, they could select only the most promising local applicants, particularly those who had received high grades and had received their Associate of Arts degree. They could then make up for the shortfall by admitting out of state and international students.

Class and race may be playing an unfortunate part in these results as well. Typically, many transfer students are lateral transfers, which means they move from one 4-year school to another. These students tend to be of a significantly higher socioeconomic class than their counterparts transferring from community colleges. However, with fewer students moving long distances to attend new schools, more community college students are transferring now and fewer lateral transfers. These population changes make a difference since, as we know, economically disadvantaged students tend to struggle in their first years in a 4-year college and experience higher dropout rates as well (Titus, 2006).

The result is that more students from lower socioeconomic status and less-educated families were accepted in Fall 2020. These groups have traditionally struggled in four-year colleges and experience higher dropout rates than their peers (Titus, 2006). To make matters worse, many of these individuals are now transferring to a new and more competitive environment during a stressful pandemic. Many of the transfers are also likely to have fewer hours to devote to studying, especially if they struggle economically.

However, there are other possible explanations. One of the predictors for the success of transfer students in the new institution is their social integration into their new academic home. Many students transferring have reported difficulty making new friends and feeling at home. However, this problem is generally alleviated over time as they meet other students on campus and in the dorms (Townsend & Wilson, 2006).

There is no question that this difficulty is exasperated for new students in COVID-19. The usual avenues for making new friends and obtaining a social support system may not be available as social events do not occur. Meanwhile, for students attending the school before the pandemic, life is easier socially speaking. They have already made friends and can rely on social support.

The most likely explanation combines the two. Schools are now admitting students with lower GPA's and fewer completed years in community college. These students tend to be of lower socioeconomic status and come from families with less higher education experience. These vulnerable students are now more socially isolated than they would be in a more typical year.

This study and other relevant research into transfer students show that it is not particularly useful to treat transfer students as one unit. How student transfers as a group have fared in the past tells us little about the likely outcome facing a specific individual. Now that the effects of COVID-19 have changed the population of transfer students, it performs quite differently.

Conclusions

In summary, the results show that transfer students have not fared as well for this business class and continuing students in switching to fully online learning. Further research is needed to determine the causal mechanism behind these findings. However, previous studies give us an indication of the likely factors at play here. These are most likely the admission of more vulnerable students and their isolation due to the pandemic.

Transfer students will need additional academic support to do well in an online learning environment. That support will have to be multi-pronged as the problem is educational, social, and economical.

The discipline of the transferring students has been shown to influence their performance upon transferring directly. Business students experience more 'transfer shock' than their counterparts in other fields (Cedja, 1997). However,

additional research is needed to confirm these results. These results may not hold across all types of business classes.

Future research on transfer students during COVID-19 should emphasize differences in socioeconomic status and race. Other researchers have found that the impact of the pandemic on individuals varies significantly when we take those factors into account.

Additional research on specific transfer student characteristics would also be helpful. It may be that students transferring from certain institutions may do more poorly than those from other institutions. There may be additional factors such as student age, which impact transfer students' success in online environments. In any event, future research should avoid lumping together all transfer students into one group. It is clear that lateral transfers, lower socioeconomic status transfers, minorities, and other subgroups within the larger group of 'transfer students' fair quite differently academically. These divisions are merely sharpened, not created, by the plight induced by the pandemic.

If these findings are accurate, they have important repercussions. We have long been aware of the difficulty students of lower socioeconomic status have integrating into 4-year schools and obtaining their degrees. Although many schools have made significant strides in that regard, there is still improvements to be made. The situation may be exacerbated by accepting only the best-prepared students from community colleges. The pandemic seems to have made the situation worse, and transfer students are suffering economically and socially. Universities should consider expanding resources to alleviate their transfer students' plight, now more than ever.

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Acta Educationis Generalis
Volume 11, 2021, Issue 2

Pre-Service Teachers' Perceptions of ICT and TPACK Competencies

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DOI: 10.2478/atd-2021-0013

Received: June 13, 2020; received in revised form: November 30, 2020;
accepted: December 2, 2020

Abstract:
Introduction: The competencies needed for information and communication technologies (ICT) integration in the teaching-learning process are related to the use of technology, pedagogical attitudes, and content planning. These qualifications are all interrelated and should not be seen separately (Becuwe et al., 2017). In this context, ICT and TPACK competencies are important for ICT integration. The standards of ISTE for educators define the ICT skills that teachers should have as designers and facilitators (International Society for Technology Education [ISTE], 2020). These standards are gathered within the framework of ICT literacy, digital literacy, and ICT competence (Tondeur et al., 2017). The concept of ICT competence discussed in this study refers to the integrated and functional use of digital knowledge, skills and attitudes (Hatlevik et al., 2015). In this study, the ICT integration competencies of pre-service teachers (PSTs) were examined as ICT competencies and TPACK competencies in terms of a range of variables. For this purpose, the following question was asked: "Is there any significant difference in the ICT integration competencies of PSTs according to a range of variables?"
Methods: This study is based on causal-comparative research. The research was conducted in the autumn term of the 2019-2020 academic year. A convenience sampling method was used. In this regard, 413 PSTs, who are students of faculties of education at ten state universities located in different cities in Turkey, participated voluntarily in the study. The "Pre-service Teachers' ICT Competencies Scale" developed by Tondeur et al. (2017) and the "TPACK-Deep Scale" developed by Kabakçı Yurdakul et al. (2012) were used to collect the data in the study. In addition to the scales, seven questions were asked about gender, grade, department, GPA, ICT course grade, owning a computer for educational purposes, and one's perceived ability to use technology. Two methods have been adopted to collect data. The first was to collect the printed forms that were completed

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in pen by the PSTs, and the second was to prepare the electronic form and deliver it to the PSTs via e-mail and social media applications and then collect the data. To analyse the data, descriptive statistics, independent samples t-test and one-way analysis of variance (ANOVA) were used.
Results: ICT and TPACK competencies of PSTs differ according to grade, having one's own computer for educational purposes, and one's perceived ability to use technology, but do not differ by gender. There is no significant difference in ICT and TPACK competencies according to the gender of PSTs. There is a significant difference in ICT and TPACK competencies according to the grade of PSTs and this difference is in favour of fourth grades. There is a significant difference in terms of ICT competencies and TPACK competencies according to computer ownership for educational purposes. This difference is in favour of PSTs who have their own computers. According to the perceived ability to use the technology of PSTs, there is a significant difference in ICT competencies and TPACK competencies. This difference is in favour of PSTs who think they can use technology at the advanced or expert level.
Discussion: In the face of constantly developing and changing technology, an important consideration is the competencies teachers and PSTs should have for ICT integration. Factors contributing to the explanation of the ICT integration process such as skills and competencies, pedagogical beliefs and self-efficacy, professional development and teacher experiences, ICT infrastructure, and access and tools are seen to have a positive effect on ICT use (Kaya & Usluel, 2011). It has been suggested that competence and pedagogical knowledge regarding ICT integration as perceived by teachers are important when starting to integrate ICT into teaching practices (Aslan & Zu, 2015). In this study, it was found that there is a difference in ICT integration competencies of PSTs in favour of those who have their own computers and those who think they can use technology at the advanced or expert level. As the PSTs experience an increase in their perceived level of skill in their use of technology, their ICT integration competencies increase. This study also shows that PSTs' computer ownership has an impact on their education and improves their technological skills, making a difference in terms of ICT integration competencies.
Limitations: This study was limited to PSTs who studied at the faculty of education at state universities in Turkey. In addition, two scales related to ICT integration and one demographic questionnaire were used. Also, the convenience sampling method was used and the sampling was confined to 413 PSTs.
Conclusions: There is a need for educational processes that emphasise technology's educational value and enable teachers to improve themselves pedagogically and plan more effective teaching-learning processes using this pedagogical knowledge. To meet the needs of the learners of this century, teachers must first be equipped with the necessary knowledge and skills in their educational processes (Yıldırım, 2000; Zhou et al., 2010). PSTs should experience this process in their teaching-learning process,

and should receive training in the integration of ICT in the teaching-learning process (Çubukçu et al., 2017). Research shows that the learning experiences of PSTs in this sense and the integration of ICT with their subject areas are closely related to understanding the educational value of ICT (Mumcu & Usluel, 2015). Academics, who take a role in teacher education, should use technology effectively in their lessons, and PSTs should experience the educational uses of technology through their education (Başal, 2015). In this sense, academics who take part in teacher education have important duties.

Key words: ICT integration, pre-service teachers, ICT competencies, TPACK competencies.

Introduction

The integration of information and communication technologies (ICT) into the teaching-learning process is a complex process involving different actors and activities, including the student, teacher, technology, school, and system (Bozdağ, 2017). Effective ICT integration is the process of adapting to technology at the individual and organisational level and transforming it into culture (Çubukçu et al., 2017). It has been observed that the studies examining the effective use and integration of ICT in the teaching-learning process in the late 1990s and early 2000s focused on describing the situation and defining the factors that hinder it. In this sense, one of the most important studies was done by Ertmer (1999). Ertmer (1999) defined obstacles as the first and second level in ICT integration. First-level obstacles were called external barriers, such as access to technology, and the school's level of support; second-level barriers were called internal barriers related to the knowledge, beliefs and attitudes towards technology that needed improvement. Today, technical problems such as the infrastructure and hardware of schools, which are called external barriers, have been overcome, and an improvement has been achieved in teachers' and students' access to technology. However, it does not seem possible for teachers to use this technology in the classroom. Research shows that even experienced teachers do not have the necessary competence to integrate ICT into the teaching-learning process, although they have the necessary skills related to ICT (Aslan & Zu, 2015). There is a need for a change in the knowledge, beliefs, and attitudes of teachers about ICT integration. A multidimensional effort is needed to deal with internal barriers, including teacher competencies (Nelson & Hawk, 2020).

ICT is only a tool, and the fact that it exists in the classroom does not mean that ICT is automatically used effectively in the teaching-learning process (Nelson & Hawk, 2020). Similarly, teachers' perceptions about using ICT should not be taken as an indication that they effectively use ICT in the teaching-learning

process; that is, they integrate ICT (Mumcu, 2017). It should be understood from the integration of ICT that the borders between ICT and learning and teaching disappear and that ICT is an invisible but significant part of the process. ICT integration should support students to construct knowledge by completing meaningful and realistic tasks.

Research carried out within the last decade indicates that teachers should aim for effective use of their ICT knowledge and skills in teaching-learning processes (Angeli & Valanides, 2009), and teachers should have the necessary ICT competencies to demonstrate the transformative effect of ICT in education (Göktaş, Yıldırım, & Yıldırım, 2009). Because changes in technology force schools to integrate innovative technologies into the teaching-learning process, teachers are expected to have digital skills and competencies to use effectively in the teaching-learning process (Kozma, 2010). In this study, ICT integration competencies of pre-service teachers (PSTs) were examined in terms of a range of variables and evaluated within the scope of teacher education.

1 Theoretical background

1.1 The role of teachers in ICT integration

The obstacles defined in the integration of ICT into the teaching-learning process are mostly encountered by teachers (Tosuntaş, Çubukçu, & İnci, 2019). Studies examining teachers' use of technology demonstrate that teachers' use of ICT for teaching purposes, and teachers' attitudes, perceptions, beliefs, and views on ICT usage are the most studied topics (Kurtoğlu & Seferoğlu, 2013). Students and teachers are the main actors of the teaching-learning process, especially in the classroom. Teachers also think that their role is vital in the ICT integration process (Keleş & Güntepe, 2018). Thus, the studies have focused on teachers' classroom practices and the difficulties they experience in this process. At this point, it is crucial to examine how teachers use ICT in the teaching-learning process.

Teachers mostly use ICT applications for personal and managerial purposes (Mumcu & Usluel, 2010) and mostly use word-processor programmes and Internet applications (Usluel, Mumcu, & Demiraslan, 2007). Teachers have been successful in basic computer applications, such as word processing, but they have failed in applications such as educational software; the teachers, therefore, seem to have important deficiencies in ICT applications (Cüre & Özdener, 2008). Although teachers' skills in their use of ICT resources and applications are important, having competencies related to ICT integration is also important in terms of the use of technology in teaching (Çırak & Demir, 2014). In addition to ICT literacy, teachers need to know how to use ICT effectively in education (Çam & Saltan, 2019) and support it with appropriate pedagogical approaches (Ersoy, Yurdakul, & Ceylan, 2016; Şahin et al., 2013). In this context, there are significant differences in ICT integration according to the teachers' training in

ICT (Usluel, Mumcu, & Demiraslan, 2007). It has been suggested that teacher education programmes should be revised to develop the technological and pedagogical knowledge and skills of PSTs (Başal, 2015).

Providing PSTs with training in ICT integration facilitates changes in their knowledge and skills in implementing ICT integration. In the study conducted by Mumcu (2017), PSTs' concerns about ICT integration and their beliefs about ICT integration obstacles disappeared due to ICT integration training. Also, their thoughts about ICT usage in the teaching-learning process shifted from teacher-centred understanding to student-centred understanding. Studies have demonstrated that teachers and PSTs who have such training have improved their ICT integration skills in overcoming significant obstacles such as classroom management (Çelik, Hebebci, & Şahin, 2016; Güneş & Buluç, 2018). Teachers should have the necessary knowledge and skills to ensure ICT integration and they should be able to design appropriate learning environments that will support their students' high-level thinking skills such as problem-solving and creative thinking, encourage their students to have a positive attitude in this regard, and ensure cooperation among students. In this respect, teacher education institutions are expected to equip PSTs with the appropriate knowledge and skills (Birişçi & Kul, 2018).

1.2 ICT integration competencies of PSTs

In integrating ICT in the teaching-learning process, it is essential to plan the process from preparation and implementation to measurement and evaluation (Haşlaman, Mumcu, & Usluel, 2007; Uslu & Usluel, 2020). Within the scope of ICT integration competencies, teachers are expected to plan lessons that include the use of ICT and should consider their students' needs and differences when they prepare their learning resources (Sarı et al., 2016). To do this, the teacher should have ICT competencies and technological pedagogical content knowledge competencies, as well as ICT literacy. Teachers should be provided with the necessary competencies in this sense (Atalay & Anagün, 2014). Teachers need professional development in technology, pedagogy and content interaction, and their experience, education, and training levels in ICT integration affect their competencies in this regard (Çırak & Demir, 2014). It has been demonstrated that teachers' experiences and ideas gained during their training in ICT integration have a positive effect on their ICT competencies, resulting in a positive relationship between ICT application successes and teachers' attitudes towards ICT (Cüre & Özdener, 2018). In this regard, the technological pedagogical content knowledge (TPACK) model (Mishra & Koehler, 2006) is a frequently used teacher education model.

The TPACK model appears to be the most popular model used to integrate ICT into the learning-teaching process (Usluel, Özmen, & Çelen, 2015). This model can be explained briefly as the addition of technological knowledge to the pedagogical content knowledge model developed by Shulman (Figure 1).

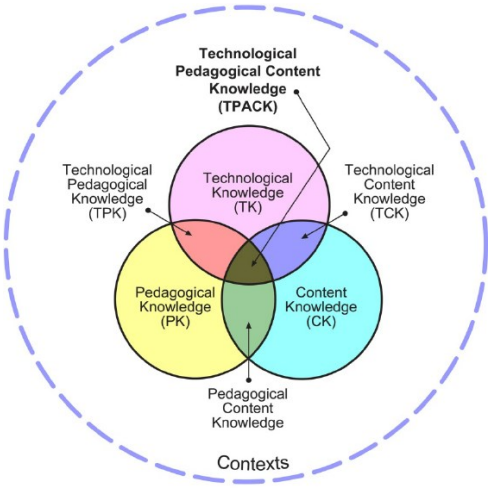

Figure 1. Technological Pedagogical Content Knowledge (TPACK) Model (Mishra & Koehler, 2006).

The three main knowledge areas of the TPACK model are technological knowledge, pedagogical knowledge, and content knowledge. Pedagogical content knowledge, technological pedagogical knowledge, technological content knowledge, and technological pedagogical content knowledge, which are the intersections of the three main knowledge areas, explain the sub-dimensions. At the centre of the TPACK model is the integrated form of the relationship between content, pedagogy, and technology knowledge. Content knowledge is the subject field that needs to be delivered to the student during the teaching-learning process. Pedagogical knowledge is about learning and teaching methods and techniques and practices. It covers all the instructional intentions, values and goals of the teacher. Pedagogical content knowledge represents the teacher's strategies to evaluate the teaching of the subjects and the students' learning about these topics. In short, it is the conversion of content knowledge into teaching activities. Defining technological knowledge is quite tricky because it is more variable than the other two core areas of knowledge. In short, it contains information on how to use technology. Technological content knowledge is an understanding of the effect of technology on content and the development of appropriate technological tools for educational purposes. It is an understanding of the way technology and content influence and limit one another. Technological pedagogical knowledge is the answer to how technology can be used to change the teaching-learning process. It can be taken as an extension of general pedagogical knowledge about knowing how technology can support specific classroom pedagogical strategies. It is not correct to present a single-use option for technology. Technological pedagogical content knowledge includes

the dynamic relationship between technology, pedagogy and content information necessary for teachers to integrate technology into the teaching-learning process. TPACK, which defines the relationship between technology, content and pedagogy for effective technology integration, represents the entire process.

As TPACK is seen as a dynamic relationship between technology, pedagogy and content, teachers are expected to evaluate technology, pedagogy and content knowledge as a whole in the process of integrating ICT (Özkara, Konokman, & Yelken, 2018). TPACK is defined as all of the knowledge required for teachers involved to present the content they handle with appropriate pedagogy and technology (Ersoy, Yurdakul, & Ceylan, 2016).

The way teachers use technology in teaching and their competencies related to technology affect their perceptions and thoughts about the interaction between technology, content, and pedagogy; it is essential, therefore, that teachers receive professional development in this sphere (Çırak & Demir, 2014). Thus, it is recommended to use the model to create experiences for ICT integration and improve the development of this knowledge, especially in teacher education (Çam & Saltan, 2019). It has been demonstrated in studies examining the TPACK competencies of PSTs that they consider themselves sufficiently equipped with pedagogical knowledge, but they are undecided regarding their competencies in other sub-dimensions (Çil & Çakmak, 2014).

The competencies needed for ICT integration in the teaching-learning process are related to technology usage, pedagogical attitudes, and content planning. These qualifications are all interrelated and should not be seen separately (Becuwe et al., 2017). In this context, ICT competencies and TPACK competencies are essential for ICT integration. The standards of ISTE for educators define the ICT skills that teachers should have as designers and facilitators (International Society for Technology Education [ISTE], 2020). These standards are gathered within the framework of ICT literacy, digital literacy, and ICT competence (Tondeur et al., 2017). The concept of "ICT competence" discussed in this study refers to the integrated and functional use of digital knowledge, skills, and attitudes (Hatlevik et al., 2015).

1.3 Research problem

There is a demand for teachers who have high-level ICT competencies and who make effective pedagogical use of ICT, and there are efforts to increase teachers' ICT integration competencies nationally and internationally. In Europe, the ICT competencies and challenges of educators have been described in the European Digital Competence Framework for Educators (DigComEdu) (Redecker, 2017). The framework is a scientific structure that describes what it means for educators to be digitally competent. It provides a general frame of reference to support the development of educator-specific digital competencies in Europe. The Turkish Ministry of National Education (MoNE) published The Generic Teacher Competencies report. In the report, the ability to use ICT effectively in

the teaching-learning process has been identified as one of the fundamental skills that every teacher should have (MoNE, 2017). Within the scope of "Digital Content and Skill Assisted Transformation in Learning Processes", two goals for digitalisation in education are set:

1. Ecosystem building for the development of digital content and skills.
2. Content development and teacher training for the development of digital skills.

Under these competencies defined by MoNE, the Higher Education Council (HEC) of Turkey made notable changes in teacher education programmes. One of the aims of the new curriculum is that PSTs can demonstrate their knowledge and skills acquired during their education in front of their classmates and a real classroom environment and use ICT effectively in the teaching-learning process within the scope of ICT related courses (HEC, 2018).

In this study, ICT integration competencies of PSTs were examined as ICT competencies and TPACK competencies in terms of a range of variables. For this purpose, the following questions were asked:

- Is there any significant difference in the ICT integration competencies of PSTs according to a range of variables?
  i. Is there any significant difference in the ICT integration competencies of PSTs by gender?
  ii. Is there any significant difference in the ICT integration competencies of PSTs by grade?
  iii. Is there any significant difference in the ICT integration competencies of PSTs according to having one's own computer for educational purposes?
  iv. Is there any significant difference in the ICT integration competencies of PSTs according to one's perceived ability to use technology?

2 Methodology

2.1 Research model

This study is causal-comparative research. Büyüköztürk (2002) defines the causal-comparative research design as a type of research that determines the causes of an emerging/existing situation or event, the variables affecting these causes, or the consequences of an impact. The researchers' goal is to compare two or more groups to determine whether the independent variables affect the outcome or dependent variable.

2.2 Study group

A convenience sampling method was used in sampling. In this regard, 413 PSTs, who are students of education faculties at ten state universities located in different cities in Turkey, participated voluntarily in the study. Demographic data related to the study group are given in Table 1.

Table 1

Demographic data of the study group

Variable	*Group*	*N*	*%*
Gender	Female	278	67.3
	Male	135	32.7
Grade	1st grade	129	31.2
	2nd grade	74	17.9
	3rd grade	60	14.5
	4th grade	150	36.3
Department	Computer education	105	25.4
	Psychological counselling and guidance	55	13.3
	Pre-school education	65	15.8
	Turkish education	39	9.4
	Social studies education	36	8.7
	Elementary mathematics education	54	13.1
	Primary education	21	5.1
	Science education	15	3.6
	Music education	23	5.6
Academic Grade Point Average (GPA)	0.00-1.50	8	1.9
	1.51-2.00	7	1.7
	2.01-2.50	74	17.9
	2.51-3.00	154	37.3
	3.01-3.50	133	32.2
	3.51-4.00	37	9.0
ICT Course Grade	0-50 point	8	1.9
	51-60 point	56	13.6
	61-70 point	101	24.5
	71-80 point	88	21.3
	81-90 point	80	19.4
	91-100 point	80	19.4
Ownership of a computer for educational purposes	None	116	28.1
	Yes	297	71.9
Perceived ability to use technology	Basic level	66	16.0
	Intermediate level	240	58.1
	Advanced level	90	21.8
	Expert level	17	4.1
Total		413	100.0

When Table 1 is examined, 67.3% of the PSTs are female and 32.7% are male. In the study group, the PSTs studying computer education, pre-school education, psychological counselling and guidance, and elementary mathematics education constitute the majority. When the distribution of the PSTs by grade is analysed, 129 (31.2%) are in the first grade, 74 (17.9%) are in the second grade, 60 (14.5%) are in the third grade, and 150 (36.3%) are in the fourth grade. 78.5% of the PSTs have an overall GPA above 2.51,

and 60.1% of them have an overall ICT course grade above 71 points. 71.9% of the PSTs have their own computer to use for their education. It has been determined that 25.9% of PSTs see themselves at an advanced and expert level in using technology.

2.3 Data collection tools

The "Pre-service Teachers' ICT Competencies Scale" developed by Tondeur et al. (2017) and the "TPACK-Deep Scale" developed by Kabakçı Yurdakul et al. (2012) were used to collect the data in the study. In addition to the scales, seven questions were asked about gender, grade, department, GPA, ICT course grade, having one's own computer for educational purposes, and one's perceived ability to use technology.

2.3.1 Pre-Service Teachers' ICT Competencies Scale

Tondeur et al. (2017) developed the scale to measure the competencies that PSTs should have to integrate ICT into teaching-learning processes. The scale was adapted into Turkish by Mumcu, Uslu, and Geriş (2018). Each item in the scale is presented for one of three dimensions of ICT competencies: (1) to educate pupils to become ICT competent, (2) to support and strengthen learning and development processes utilising ICT, and (3) to organise ICT appropriately in the learning environment. The scale consists of two factors and 19 items:

- Competencies to support pupils for ICT use in class: ICT Competence Pupil Use (ICTC-PU);
- Competencies to use ICT for Instructional Design: ICT Competence Instructional Design (ICTC-ID).

The 11 items in the ICTC-PU factor are designed to measure the competence of PSTs to educate pupils in the use of ICT for their learning processes. The eight items included in the ICTC-ID factor are designed to measure the ability of PSTs to use ICT to support and strengthen their teaching practices. As such, the items in ICTC-ID are combined with two theoretical dimensions.

The items are 5-point Likert type and the answers are expressed as 1 = "I totally disagree", 5 = "I totally agree". The original study found that the two-factor scale explained 56.3% of the total variance. In the adaptation study of the scale to Turkish by Mumcu, Uslu, and Geriş (2018), confirmatory factor analysis was performed on the data collected from 422 PSTs. As a result of DFA, the measurement model's compliance with the data was tested with a chi-square fit test, RMSEA, S-RMR, GFI, CFI, and NFI. According to the confirmatory factor analysis findings, the fit indices showed an acceptable/perfect fit. For reliability studies, a Cronbach α internal consistency coefficient and corrected item-total correlations were calculated to examine item discrimination. The Cronbach α internal consistency coefficient of the Turkish form of the scale was calculated as .953.

2.3.2 TPACK-Deep Scale

Kabakçı Yurdakul et al. (2012) developed the scale to determine the competency levels of PSTs for techno-pedagogical education. The scale consists of 33 items and displays a four-factor structure: design, exertion, ethics, and proficiency. Items are of the 5-point Likert type, and the answers are expressed as 1= "I absolutely cannot do it", to 5= "I can definitely do it".

The "design" factor, which is the first factor of the scale, refers to the teaching design competencies that will enrich the teaching process by blending the technology and pedagogy knowledge suitable for the content to be taught. There are a total of ten items in this factor. The second factor of the scale is "exertion". This factor refers to the PSTs' competence in using technology to conduct the teaching process designed for the subject area, and their ability to measure and evaluate the effectiveness of the process. There are a total of 12 items in this factor. The third factor of the scale is "ethics". This factor refers to the competencies of PSTs in teaching ethics, as well as copyright, intellectual property, accuracy of information, confidentiality, and security in technology ethics. There are six items in this factor. The last factor of the scale is "proficiency". This factor includes producing suggestions for solving problems related to the subject area, the teaching process, and technology, choosing the appropriate solution, and leading the environment to integrate technology with content and pedagogy. There are five items in this factor.

Exploratory factor analysis was performed to examine the construct validity of the scale. It was determined that the scale consisting of 33 items had a four-factor structure in its final form, the explained variance was 58.591% and the factor load values were between .562 and .776. The internal consistency coefficient for 33 items was calculated as $\alpha = .96$. Internal consistencies in terms of the factors forming the scale were calculated as $\alpha = .91$ for the "design" factor, $\alpha = .92$ for the "exertion" factor, $\alpha = .87$ for the "ethics" factor and $\alpha = .86$ for "proficiency".

2.4 Data collection

The research was conducted in the autumn term of the 2019-2020 academic year. Two methods have been adopted to collect data. The first was to collect the printed forms that were completed in pen by the PSTs, and the second was to prepare the electronic form and deliver it to the PSTs via e-mail and social media applications and then collect the data. The Google Forms application was used for the second data collection method.

2.5 Data analysis

Independent samples t-test and one-way analysis of variance (ANOVA) were used to test the significance of the difference between the means, and descriptive statistics were also used for the research. The significance level was taken as $\alpha = 0.05$ for independent samples t-test and ANOVA. For ANOVA, the Bonferroni

test was used to find the difference between the groups. An SPSS programme was used for analyses.

3 Results

ICT integration competence levels of PSTs in terms of ICT and TPACK competencies have been examined by gender, grade, having one's own computer for educational purposes, and one's perceived ability to use technology. For this purpose:

- Analysis was carried out to establish whether there was a significant difference between ICT competence levels of PSTs in terms of ICTC-PU and ICTC-ID. To this end, independent samples t-test and ANOVA were conducted.
- Analysis was carried out to establish whether there was a significant difference between TPACK competence levels of PSTs in terms of design, exertion, ethics, and proficiency. For this purpose, independent samples t-test and ANOVA were conducted.

The study results and the findings are given below according to gender, grade, having one's own computer for educational purposes, and one's perceived ability to use technology.

3.1 ICT integration competencies of PSTs by gender

The independent samples t-test was conducted to examine whether there is a significant difference between the ICT integration competence levels of PSTs according to their gender. The findings of the analyses are given in Table 2 and Table 3.

Table 2

Findings of independent samples t-test analysis for ICT competencies by gender

	Groups	*N*	$\bar{x}$	*SD*	*t*	*DF*	*p*
ICTC-PU	Female	278	42.82	9.051	-	411	0.76
	Male	135	43.11	8.880	0.305		1
ICTC-ID	Female	278	30.19	6.659	-	411	0.28
	Male	135	30.94	6.814	1.071		5

As seen in Table 2, the mean of the competence to support students for ICT use in the classroom (ICTC-PU) of 278 female PSTs is 42.82 and that of 135 male PSTs is 43.11. The mean of the competence to use ICT for instructional design (ICTC-ID) of female PSTs is 30.19 and of that male PSTs is 30.94. As a result of independent samples t-test analysis, there is no significant difference at the level of .05 between the ICT competencies of PSTs by gender (ICTC-PU [$t(411)=-0.305$, $p>0.05$] and ICTC-ID [$t(411)=-1.071$, $p>0.05$]).

Table 3

Findings of independent samples t-test analysis for TPACK competencies by gender

	Groups	*N*	$\bar{x}$	*SD*	*t*	*DF*	*p*
Design	Female	278	38.48	6.941	-0.215	411	0.830
	Male	135	38.64	8.161			
Exertion	Female	278	47.38	8.694	0.799	411	0.425
	Male	135	46.61	9.878			
Ethics	Female	278	23.75	4.444	0.795	411	0.427
	Male	135	23.37	4.709			
Proficiency	Female	278	18.19	3.891	-1.215	411	0.225
	Male	135	18.70	4.206			

As seen in Table 3, as a result of independent samples t-test analysis, there is no significant difference at the level of .05 between the TPACK competencies of PSTs by gender (Design [t(411)=-0.215, p>0.05]; Exertion [t(411)=0.799, p>0.05]; Ethics [t(411)=0.795, p>0.05]; Proficiency [t(411)=-1.215, p>0.05]).

3.2 ICT integration competencies of PSTs by grade

ANOVA was conducted to examine whether there is a significant difference between the ICT integration competence levels of PSTs according to their grades. The findings of the analyses are given in Table 4 and Table 5.

Table 4

Findings of ANOVA for ICT competencies by grade

	Source of variance	*Sum of squares*	*DF*	*Mean squares*	*F*	*p*	*Bonferroni*
ICTC-PU	Between groups	1633.404	3	544.468	7.040	.000*	1-3 1-4
	In groups	31 633.797	409	77.344			
	Total	33 267.201	412				
ICTC-ID	Between groups	1119.670	3	373.223	8.755	.000*	1-3 1-4
	In groups	17 435.749	409	42.630			
	Total	18 555.419	412				

* α=0.05; 1: 1st grade 2: 2nd grade 3: 3rd grade 4: 4th grade

According to Table 4, there is a significant difference between:

- the competence to support students for ICT use in the classroom (ICTC-PU) of PSTs by grade (F=7.040, p<=0.05), and
- the competence to use ICT for instructional design (ICTC-ID) of PSTs by grade (F=8.755, p<=0.05).

The Bonferroni test was conducted to find out which groups have a difference in means. It was found that ICT competencies of PSTs who attend to third and fourth grades are higher than PSTs who attend first grade in terms of ICTC-PU and ICTC-ID.

Table 5

Findings of ANOVA for TPACK competencies by grade

	Source of variance	*Sum of squares*	*DF*	*Mean squares*	*F*	*p*	*Bonferroni*
Design	Between groups	1008.656	3	336.219	6.468	.000*	1-3 1-4
	In groups	21 262.153	409	51.986			
	Total	22 270.809	412				
Exertion	Between groups	1172.859	3	390.953	4.861	.002*	1-4
	In groups	32 893.340	409	80.424			
	Total	34 066.199	412				
Ethics	Between groups	259.205	3	86.402	4.312	.005*	1-4
	In groups	8195.623	409	20.038			
	Total	8454.828	412				
Proficiency	Between groups	272.030	3	90.677	5.872	.001*	1-3 1-4
	In groups	6316.358	409	15.443			
	Total	6588.387	412				

* α=0.05; 1: 1st grade 2: 2nd grade 3: 3rd grade 4: 4th grade

According to Table 5, there is a significant difference between TPACK competencies of PSTs in terms of design, exertion, ethics and proficiency by grade, namely:

- Design that indicates the instructional design competencies that will enrich the teaching process by blending the PSTs' technology and pedagogy knowledge appropriate to the content to be taught (F=6.468, p<=0.05),
- Exertion expressing the competence of using technology in the implementation of the teaching process designed for the subject area and competence in measuring and evaluating the effectiveness of the process (F=4.861, p<=0.05),
- Ethical issues addressing the issues of copyright, intellectual property, accuracy, confidentiality and security of technology ethics, as well as teaching professional ethics (F=4.312, p<=0.05), and
- Proficiency in the ability to produce suggestions and to lead the environment in the integration of technology with content and pedagogy by specialising in the teaching profession (F=5.872, p<=0.05).

The Bonferroni test was conducted to find out which groups have a difference in means. It was found that the design, exertion, ethics, and proficiency competencies of PSTs who attend to fourth grades are higher than first grade PSTs, and design and proficiency competencies of PSTs who attend to third grades are higher than first grade PSTs.

3.3 ICT integration competencies of PSTs according to having one's own computer for educational purposes

The independent samples t-test was conducted to examine whether there is a significant difference between the ICT competence levels of PSTs according to computer ownership for educational purposes. The findings are given in Table 6.

Table 6

Findings of independent samples t-test analysis for ICT competencies according to having one's own computer for educational purposes

	Groups	*N*	$\bar{x}$	*SD*	*t*	*DF*	*p*
ICTC-PU	None	116	39.96	8.912	-4.271	411	0.000*
	Yes	297	44.07	8.761			
ICTC-ID	None	116	27.73	6.159	-5.275	411	0.000*
	Yes	297	31.49	6.631			

* α=0.05

As seen in Table 6, PSTs' ICT competencies to support students for ICT use in the classroom (ICTC-PU) [t(411)=-4.271, p>0.05] and to use ICT for instructional design (ICTC-ID) [t(411)=5.275, p>0.05] differ significantly according to computer ownership for educational purposes. ICT competencies of PSTs who own computers are significantly higher than PSTs who do not.

To examine whether there is a significant difference between TPACK competencies of PSTs in terms of design, exertion, ethics and proficiency according to computer ownership for educational purposes, independent samples t-test was conducted. The findings are given in Table 7.

Table 7

Findings of independent samples t-test analysis for TPACK competencies according to having one's own computer for educational purposes

	Groups	*N*	$\bar{x}$	*SD*	*t*	*DF*	*p*
Design	None	116	36.28	6.580	-3.952	411	.000*
	Yes	297	39.41	7.461			
Exertion	None	116	44.00	8.672	-4.469	411	.000*
	Yes	297	48.35	8.974			
Ethics	None	116	22.28	4.321	-3.844	411	.000*
	Yes	297	24.15	4.508			

Proficiency	None	116	17.09	3.732	-4.073	411	.000*
	Yes	297	18.85	3.998			

* α=0.05

As seen in Table 7, TPACK competencies of PSTs differ significantly in terms of design, exertion, ethics and proficiency according to computer ownership for educational purposes. The TPACK competence level of PSTs who have their own computers is found to be significantly higher than that of PSTs who have not (design [t(411)=-3.952, p<0.05); exertion [t(411)=-4.469, p<0.05]; ethics [t(411)=-3-844, p<0.05]; proficiency [t(411)=-4.073, p<0.05]).

3.4 ICT integration competencies of PSTs according to one's perceived ability to use technology

ANOVA was conducted to examine whether there is a significant difference in the ICT integration competence level according to how PSTs perceive their ability to use technology. The findings of the analyses are given in Table 8 and Table 9.

Table 8

Findings of ANOVA for ICT competencies according to one's perceived ability to use technology

	Source of variance	*Sum of squares*	*DF*	*Mean squares*	*F*	*p*	*Bonferroni*
ICTC-PU	Between groups	2985.324	3	995.108	13.440	.000*	1-2 1-3 1-4
	In groups	30 281.877	409	74.039			
	Total	33 267.201	412				
ICTC-ID	Between groups	2107.613	3	702.538	17.470	.000*	1-2 1-3 1-4 2-3 2-4
	In groups	16 447.806	409	40.215			
	Total	18 555.419	412				

* α=0.05; 1: Basic level 2: Intermediate level 3: Advanced level 4: Expert level

As seen in Table 8:

- There is a significant difference in the competence of PSTs to support students for ICT use in the classroom (ICTC-PU) according to how PSTs perceive their ability to use technology (F=13.440, p<0.05). The findings of the Bonferroni test showed that the ICTC-PU competencies of PSTs who perceive their technology use as being at intermediate, advanced or expert level are higher than PSTs who perceive their technology use as being at a basic level.

- There is a significant difference in the competence of PSTs to use ICT for instructional design (ICTC-ID) according to their perception of their ability to use technology (F=17.470, p<0.05). The findings of the Bonferroni test showed that the ICTC-ID competencies of PSTs who perceive their technology use as being at advanced or expert level are higher than PSTs who perceive their technology use as being at a basic or intermediate level.

Table 9

Findings of ANOVA for TPACK competencies according to one's perceived ability to use technology

	Source of variance	Sum of squares	DF	Mean squares	F	p	Bonferroni
Design	Between groups	3301.169	3	1100.390	23.725	.000*	1-2 1-3 1-4 2-3 2-4
	In groups	18 969.639	409	46.381			
	Total	22270.809	412				
Exertion	Between groups	4701.366	3	1567.122	21.827	.000*	1-2 1-3 1-4 2-3 2-4
	In groups	29 364.832	409	71.797			
	Total	34 066.199	412				
Ethics	Between groups	825.640	3	275.213	14.754	.000*	1-2 1-3 1-4 2-3 2-4
	In groups	7629.188	409	18.653			
	Total	8454.828	412				
Proficiency	Between groups	1027.739	3	342.580	25.198	.000*	1-2 1-3 1-4 2-3 2-4
	In groups	5560.648	409	13.596			
	Total	6588.387	412				

* α=0.05; 1: Basic level 2: Intermediate level 3: Advanced level 4: Expert level

As seen in Table 9, there is a significant difference in the TPACK competencies of PSTs in terms of design, exertion, ethics and proficiency according to the PSTs' perception of their ability to use technology (Design [F=23.725, p<=0.05]; Exertion [F=21.827, p<=0.05]; Ethics [F=14.754, p<=0.05]; Proficiency [F=25.198, p<=0,05]). The findings of the Bonferroni test showed that TPACK competencies for design, exertion, ethics and proficiency of PSTs who perceive their technology use as being at an advanced or expert level are higher than PSTs who perceive their technology use as being at a basic or intermediate level.

As a result, the ICT and TPACK competencies of PSTs differ according to grade, having one's own computer for educational purposes, and one's perceived ability to use technology, but do not differ by gender. It was observed that the ICT integration competencies of PSTs differ between those who attend fourth grade and the others, between those who own a computer for educational purposes and those who do not, between those who perceive their technology use as being at an advanced or expert level and the others.

4 Discussion

In the face of continually developing and changing technology, it is difficult to ascertain which competencies teachers and PSTs should have for ICT integration. Factors contributing to the explanation of the ICT integration process, skills and competencies, pedagogical beliefs and self-efficacy, professional development and teacher experiences, ICT infrastructure, access, and tools are seen to positively affect ICT use (Kaya & Usluel, 2011). Teachers' perception of competencies and pedagogical knowledge regarding ICT integration is essential when starting to integrate ICT into teaching practices (Aslan & Zu, 2015). In this study, the ICT integration competencies of PSTs were examined according to gender, grade, having one's own computer for educational purposes, and one's perceived ability to use technology. There is no significant difference in ICT competencies and TPACK competencies according to the gender of PSTs. This result is in line with the studies in the literature (Gömleksiz & Fidan, 2013; Çoklar, 2014; Şad & Nalçacı, 2015; Bakaç & Özen, 2018). There is a significant difference in ICT competencies and TPACK competencies according to the grade of PSTs. This difference is in favour of the fourth grades. As the level of PSTs' grade increases, their levels of ICT integration competence increase.

According to computer ownership for educational purposes, there is a significant difference in terms of ICT competencies and TPACK competencies. This difference is in favour of PSTs who own computers. Studies show that teachers' ICT competence levels differ according to their computer ownership status (Şad & Nalçacı, 2015). Also, studies demonstrate that teachers' TPACK levels change according to their ability to access technology (Özkara, Konokman, & Yelken, 2018).

According to PSTs' perceived ability to use technology, there is a significant difference in ICT competencies and TPACK competencies. This difference is in favour of PSTs who think they can use technology at the advanced or expert level. As the PSTs experience an increase in their perceived level of skill in their use of technology, their ICT integration competencies increase. Samancıoğlu and Summak (2014) state that technology usage in teachers' lessons depends on their computer usage skills. Özgen, Narlı and Alkan (2013) found that PSTs' TPACK scores differ according to the frequency they perceive in technology use. Another study conducted with PSTs demonstrated that the TPACK

competencies of the PSTs changed according to the ICT usage stages (adherence, comprehension, influence, and renewal) (Çoklar, 2014). For example, it was observed that a PST at the renewal stage had higher TPACK competence than the PSTs at the level of comprehension, and the ICT usage stages of PSTs were a predictive and important variable in TPACK competency. Şimşek and Yazar (2018) found that PSTs' technology knowledge self-efficacy is an important variable affecting technology integration. The ICT competencies and TPACK competencies of PSTs who perceive their abilities as proficient in terms of ICT use in this study are significantly different. This study shows that PSTs' computer ownership has a significant impact on their education; it enables them to improve their skills in the use of technology and is advantageous in terms of ICT integration competencies.

Conclusion

Teaching is a profession that requires continuous personal and professional development (Noga, 2016). There is a need for educational processes that emphasise technology's educational value and enable teachers to improve themselves pedagogically and plan more effective teaching-learning processes using this pedagogical knowledge. To meet the needs of the learners of this century, teachers must first be equipped with the necessary knowledge and skills in their educational processes (Yıldırım, 2000; Zhou et al., 2010). PSTs should experience this process in their teaching-learning process, and should receive training in the integration of ICT in the teaching-learning process (Çubukçu et al., 2017). Research shows that the learning experiences of PSTs in this sense and the integration of ICT with their subject areas are closely related to understanding ICT's educational value (Mumcu & Usluel, 2015). Academics who take a role in teacher education should use technology effectively in their lessons and PSTs should experience the educational uses of technology through their education (Başal, 2015). However, it has been observed that faculty members of colleges of education face some problems in their lectures such as a lack of technical infrastructure, a lack of technical knowledge, and problems arising from technical failures, and they try to find solutions such as asking stakeholders for help in dealing with these problems, using different technologies, or trying alternative methods (Keleş & Güntepe, 2018). As a whole, teacher educators have substantial duties and should take a more active role in addressing this issue in teacher education programmes (McGarr & Gallchoir, 2020). Inadequate attention is paid to initial teacher education in ICT competencies. It is thought that PSTs are knowledgeable about technology and this issue is handled effectively in their education. Therefore, there seems to be a belief that development in this area is less of a priority (McGarr & McDonagh, 2020). Discussion of the competencies for ICT integration is closely related to the design and quality of learning opportunities to which PSTs are exposed during their teacher education programmes (European Commission, 2013). It is

considered that there is a need for revising the course content and teaching processes within the framework of the competencies PSTs should have. In this context, it can be argued that while focusing on ICT integration competencies in teacher education, a more comprehensive understanding should be provided, and sustainable arrangements are needed to develop the ICT competencies and TPACK competencies of PSTs, which are essential factors in the ICT integration process.

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Acta Educationis Generalis
Volume 11, 2021, Issue 2

Nursery School Cooperation with the Family in the Field of Media Education in Children

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DOI: 10.2478/atd-2021-0014

Received: January 11, 2021; received in revised form: July 9, 2021;
accepted: July 12, 2021

Abstract:
Introduction: The paper focuses on a narrowly specific topic of the family cooperation with an institution of pre-school education - the nursery school (or also just the nursery), concentrating on a specific topic of "media education". It considers the determining factors and presents partial findings of a research survey aimed at the field of media education in nursery schools.
Methods: The paper contains the results of our own questionnaire research, which was carried out online in nursery school teachers. It also contains a theoretical definition of media literacy and media education in the context of the target group.
Results: The result is an analysis of the obtained findings and formulated proposals for measures in the given field, which are usable and applicable in practice.
Discussion: The individual presented results are continuously discussed with regard to the findings from the field of media education in the nursery school. Today, the world of the media is a common part of life even for children of pre-school age, and therefore it is necessary to teach them to orient themselves in it, which should be one of the tasks of the nursery school. In the Czech Republic, this issue has not yet been addressed at a significant level or to an appropriate extent. Our results are therefore closely linked not only to the discussion comments, but also to the conclusions drawn from them.
Limitations: The results of the empirical research may be influenced by the attitudes and prejudices of nursery school teachers in relation to media in pre-school children.
Conclusion: An early intervention can teach children to use media for their benefit and prevent media from negatively affecting them. The negative consequences of unrestrained effects of e.g. the television or

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mobile phones have been empirically proven. This information about the negative consequences is very general, distorted or superficial for the general public (parents), though. We consider the implementation of media education into the "teaching" process in nursery schools to be inevitable, even with regard to a closer cooperation between the institution and parents. However, this also places increased demands on training pedagogical staff in nursery schools in the subject area, creating methodological materials, etc.

Key words: nursery/nursery school, media education, media literacy, pre-school age, family, cooperation.

Introduction

The importance of media education for children is currently constantly growing. However, the rate of increase in this need often does not correspond to the rate of emergence of systems and the very reaction of the institutions that should implement it. We could discuss this paradox for a long time, as there are many factors affecting this fact. We would like to focus only on one of them, which is important from our point of view, and that is the area of cooperation between educational institutions - the family and the nursery school. This is based on an idea built on the respect for the principle of unity of educational requirements, which significantly affects the effectiveness of mutual efforts. However, it is not always easy to follow this principle in practice. In our opinion, significant (but not exclusive) variables here are the following:

- the nature of the cooperation itself (determined socially, and especially by the nature of the setting/management of the nursery realized in the direct work of a teacher),
- parents' personalities, their teaching style, way of life and attitudes,
- similarly, the teacher's personality,
- the level of society-wide perception of the issue of media education in the group of pre-school children.

From our point of view, all these factors are interconnected.

The issue of cooperation between the family and the educational institution (in our case, the nursery school) and parent education is actually a historical return to the original purpose of Fröbel's "children's gardens", which were to serve as not for educational work with children, but for educating their parents how to "work" with them (Hábl & Janiš Jr., 2010).

Historically, however, the general thematic area of the paper (cooperation between the family and the educational institution) is generally older. A parent cannot be an expert in all areas of today's modern world, know all the risks, etc. He/she must be "acquainted" with and educated in the area of new challenges that significantly and exclusively affect his/her children. We believe that parents

should also be offered education by the educational institution that their child currently attends. Although this is, from the point of view of some people, an obvious activity, the environment of media education and the media in general is indeed a dynamically changing area that requires knowledge of current scientific findings. Therefore, high demands are placed not only on parents, but also and primarily on nursery school teachers. They need (should) not only possess the required information, but also seek and use various ways of communication, cooperation and education of parents.

1 Cooperation with the family in the field of media education

In practice, we encounter different models of cooperation. Germany can provide some inspiration, where cooperation between the nursery schools and families is intensively supported (Schubert, 2018). In many facilities, the purpose is to conclude "educational" partnerships with parents based on mutual trust and recognition; their competencies are respected. Parents wish to leave the house with the feeling that they have found a good place for their child. Parents also participate in the "story" of the given facility. Cooperation (ideally, full of trust) is a prerequisite for a successful partnership between teachers and children's parents. Parents are also as welcome as children in the "KiTas" (Kindertageseinrichtungen) and they find space and opportunities for meetings and support (counselling). The parents' competencies are recognized and the needs of the family are taken into account in the provided services. Parents are offered a dialogue and counselling. The competencies of parents are the key points of pedagogical treatment (Hinke-Ruhnau, 2013). In most cases, this corresponds with the appearance and modification of the physical environment of the given facility.

At the same time, it is necessary to say that teachers (in Germany) are aware of the importance of cooperation with the family also in the field of media education; still, individual action hardly takes place in this respect (Friedrichs-Liesenkötter & Meister, 2015).

In the Czech Republic, cooperation with the family is also supported, but in some facilities, in our opinion, a certain distance persists, a kind of an invisible barrier, which is often created by the teachers themselves (perhaps subconsciously) and intuitively perceived by the parents. The perception of these subtle nuances of differences is frequently very emotional and rather difficult to grasp. In the Czech Republic, not as many materials have been published on this topic (cooperation of nurseries with families) yet as in Germany, for example. However, it is not that this is a neglected area; recently, the number of different educational opportunities (support) for teachers has been increasing. Still, the reflection in practice very much depends, among other things, on the situation of a particular facility and on the personalities of the teachers who work there. It would certainly be beneficial to direct more research attention to this area than before. There is practically no research that compares the view of parents and

teachers in relation to the given institution. Ordinarily, both groups are examined separately, or there is a more frequent research group, that is the group of teachers.
Textor (2018) distinguishes four developmentally older concepts of working with the child's family not only within the nursery school (as we understand it in the Czech Republic) (Figure 1).

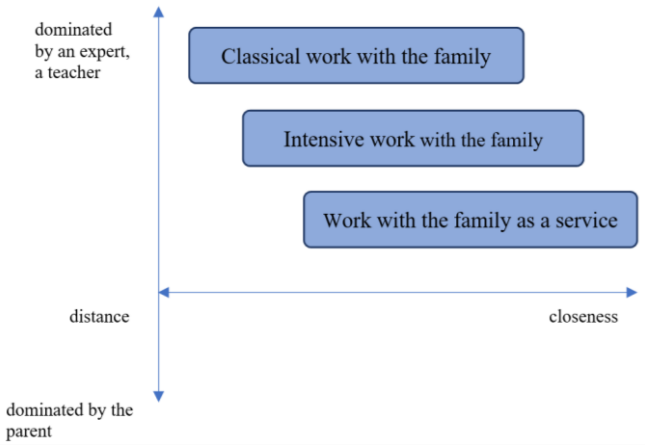

Figure 1. Older concepts of cooperation with the family (adapted from Textor, n.d.)

Traditional work with the family (still appearing in some facilities) often takes place in nursery schools when entering the classroom. The work with parents is often limited to occasional scheduled "parent evenings" (in our country, meetings for parents) and, if necessary, pre-scheduled work with the family.
Intensive work is related to a critical view of the family education from the position of teachers (educators) and the associated tendency to provide parents with professional pedagogical knowledge. A typical topic for "family evenings" is, for example, dangerous effects of television, etc. Teachers are defined here as competent pedagogues, while parents are largely considered incompetent.
The third concept is "work with the family as a service". Here, the parents are perceived as clients whose needs are met through "working with the family". Typical activities within this concept include, for instance, various inquiries about the needs and wishes of parents, offers such as "coffee for parents", "round tables for parents", barbecues, etc.
The current latest concept of cooperation with the family is an educational (and pedagogical) partnership, which confirms the above explained. Mutual openness is crucial; all partners must find time to exchange important information. The child is perceived comprehensively - not only his/her competencies and abilities, but also strengths and weaknesses, interests, behaviours and habits, friendships, joys and problems (Textor, 2018). This kind of development describes the

situation in Germany, but it cannot be said that the same is true in other countries. There are high demands on teachers; it is not easy to adopt such a partnership in all circumstances. Both parties need to take on the partnership role and comprehend that it is in the best interests of the child. We should also build on relevant research findings, even though, as already mentioned, there is a lack of them in the Czech environment, or they only deal with partial areas.

Various forms of cooperation are applied within individual models. Schubert et al. (2018) consider - in particular - the following suitable forms of cooperation between schools and families in media education:

Informative format:

- documentation as one of the most important forms (photographs, a video, portfolio, etc.),
- letters to parents on the topic of media education (note: this form is not widely used in the Czech environment; these are thematically oriented letters for parents, which do not convey a strict pedagogical theory, but focus on the daily life of parents with children),
- a nursery newsletter (magazine),
- information materials for parents (brochures, leaflets on the topic of media education),
- recommendations of suitable and pedagogically valuable applications for digital media.

Consulting format:

- (developmental) dialogues (individual),
- dialogues on the arrival and departure of the child from the nursery,
- parent evenings on media topics (ideally supported by an expert on the topic; information, as well as examples),
- "parent days", where the parents can see the nursery school's work with (digital) media.

A survey – identifying the needs and wishes of parents in the field of media education.

Cooperation is always a reciprocal affair; on one hand, there is the offer (strategy) by the given facility, on the other hand, there are the above mentioned ideas, needs and settings of parents. In this case, we can also work on the assumption suggested by various surveys dealing with the characteristics of the types of parental approaches or focus. E.g., the survey School My Project for Idea Sense (2019) distinguished between four groups of parents (500 respondents - parents of children aged between 4-7 years old) according to the identified needs of the parents:

- those engaged with a clear idea (22%);
- those orderly with the need for control (28%);
- those communicative with an emphasis on relationships (26%);
- those undemanding without special expectations (24%).

We can perceive the differences among parents even more intensely in the following three approaches to media based on the DIVSI study (2013) (Lepold & Ullmann, 2018):

- Digital outsiders (37%) - these parents often perceive the risks of digital media in particular; they often raise their children in a space without digital media (authors' note: And, therefore, they may have problems with the implementation of media education in pre-school education, if not properly presented and understood.).
- Digital immigrants (19%) - these parents are aware of the pros and cons as well as the threats; they are often open to an offer of counselling or actively seek information themselves.
- Digital natives (44%) - these parents perceive the world of digital media mainly as entertainment; they often have a low or very low perception of risks; they do not limit their children in media consumption in any way.

From the above stated it is clear that it is necessary, not only in media education, to work with parents not as a homogeneous group, but to perceive the differences of individual groups and, based on that, to set a "strategy" of cooperation. Some elements may still appear to be common. E.g., as a part of a survey focusing on parents' perceptions of a nursery school teacher's personality, Váchová and Vítečková (2017) found out, among other things, that parents especially tend to appreciate sincerity, concreteness and clarity in relation to themselves. Which should also be applied to the level of cooperation in the field of media education in the child.

The results of some research (MPFS [online]) provide interesting data specifically focused on media in relation to young children (2-5 years). This study, which involved a sample of 623 parents, found out, among other things, that:

- only 50% of parents described the educational field "children and the media" (among other fields) as important; however, regardless of that, 10% of parents would greatly appreciate and 55% of parents would appreciate information on this topic,
- 15% of respondents rated their own subjective awareness of the topic "children and the media" as very good, 57% as good, 25% as not very good, and 4% as insufficient,
- provided that the child had attended a pre-school facility, 66% of parents confirmed the offer of a consultation on the topic of "children and the media" as part of parent evenings or individual consultations,
- only 43% of respondents perceive a nursery school teacher as an important source of information on the topic of "children and the media".

Schubert et al. found out that pre-school teachers (in Germany) are little aware of how the parents use media at home, but observe the parents' media behaviour in a nursery (for instance, using a mobile phone when a child is trying to communicate with a parent). In addition, they pay attention to information from

children, which they communicate directly to them or which they communicate to one another (e.g., the names of games, television programmes, etc.) as well as children's behaviour (role-playing games) (Schubert et al., 2018).

What the cooperation will look like and how it succeeds, depends on the mentioned teachers (as well as the management) in the nursery school as well. It is not just about the acquired competencies, but the foundation is laid in the very personality (personality traits) of the particular educator. We assume a connection with his/her attitudes to the actual implementation of media education in the nursery, to the media activity of children at the given age and, last but not least, to the level of their own media competencies and habits.

The area of competencies themselves is very extensive, and it is not in the possibilities or goals of this paper to address them in detail; consequently, for the area of interaction with a family with impaired functionality, we will only emphasize the social, communication and counselling competencies. We can also find some inspiration in social counselling; here, adapted according to Bobek & Peniška (2008):

- trust in the abilities and resources of parents;
- unconditional acceptance and respect for parents, no matter what they are like;
- non-expertise, avoiding being directive;
- self-confidence;
- flexibility in changing one's own attitudes and perspectives;
- willingness and ability to build a partnership;
- authenticity.

The cooperation between nursery schools and parents in the field of media education is a new topic for both parties. It is closely related to cooperation and communication in general. The failure to respect the importance and urgency of this issue can have fatal consequences on the lives of individuals, but in a broader context, also for the society as a whole. It is impossible to lean towards the naive idea, which unfortunately sometimes appears in the society, that the issue of the media and thus also media education does not apply to children in nurseries.

2 Research

In our survey (Kocourková & Janiš Jr., 2019; the project Support for Media Literacy in Pre-school Children), we obtained data from 251 respondents (nursery school teachers in the Moravian-Silesian Region of the Czech Republic as the location of the project). As a type of selection, we chose a survey selection, i.e. self-selection. We concentrated on finding out about the situation in media education and its context. Attention was paid - among other things - to:

- finding out about the situation in media use by children in the home environment (its existence confirms the need for media education in pre-school age with regard to the media used),
- the existence of communication between the school and the family on issues of media education,
- the form of communication between the school and the family on issues of media education.

We used only absolute and relative frequencies to describe the gathered data. We understand our survey primarily as an insight and input into the subject matter, and we will use the obtained data in other research as background data to identify the moderating variables and mutual relations among the variables, which also result from the tables. However, due to the low frequency of some groups of respondents, we did not address the above described. In some questions, the respondents could choose more than one option, so the sum of the relative frequencies is more than 100%.

The first four tables contain data for further identification of the respondents. Tables No. 1 to 4 imply that we interviewed relatively experienced teachers who work in medium to large nursery schools. In fact, a comparison of their experiences can be viewed positively, because they can reflect changes in the behaviour of the children and their parents, and thus evaluate the possible impact of media influence. At the same time, however, there may be a risk that practical knowledge of media is the ultimate condition for education in the field of media education. Although we do not intend to present stereotypical ideas that older people "work in a more difficult way" with media, we still assume that the knowledge of online games, YouTubers, etc. is more a matter of younger people.

Table 1

Characteristics of the respondents in terms of practice

Length of practice in years		
0-3	20	0.080
4-5	18	0.072
6-10	34	0.135
11-15	22	0.088
16-20	19	0.076
21 and more	138	0.550
Total	251	1.000

Table 2

Characteristics of the respondents in terms of the type of nursery where they work

Type of school		
Public	242	0.964
Private	9	0.036
Total	251	1.000

Table 3

Characteristics of the respondents in terms of the environment in which the nursery where they work is located

Location		
Town	152	0.606
Village	99	0.394
Total	251	1.00

Table 4

Size of the nursery where the respondent comes from

Number of children in the nursery		
Up to 28	34	0.135
29-59	39	0.155
60-120	131	0.522
More than 121	47	0.187
Total	251	1.000

The above data have a descriptive character and serve to describe the research sample in more details, that is why we consider these data important and significant for the interpretation of other findings.

The fact that media education is already important at this age of children is evidenced by our partial findings. They prove the necessity of nursery schools' cooperation with families in the field of media education. Unfortunately, even among educators, there are those who do not perceive it as such, or take this topic only as a marginal issue, which was also confirmed in our research.

Table 5

Data on the use of digital media by children in the home environment as found out by the teachers

Use by children		*Absolute frequency/n = 251*
Tablet	213	0.849
Mobile phone	182	0.725
PC or laptop	198	0.789
I do not know	22	0.088
Other	2	0.008

Table 5 obviously shows that pre-school children use digital media. It is not surprising in this table that tablets and mobile phones are dominant media, as these are the devices, which are user-friendly for children with regard to their size and relatively simple operation, for example in games. What is important for us, a high percentage of teachers know what media children use in their home environments. However, the fact that 8.8% of respondents stated they did not know whether children use digital media at home is striking. This evokes a lack of interest in this educational area, or an insufficient competence in its implementation, which must be based on the diagnosis of the condition and needs.

A relatively surprising finding is the high number in the PC or laptop category. Although the child may accidentally work his/her way up to an inappropriate content or activities on any type of a device, mobile phones and tablets, as well as activities on them - can be more under the control of parents. We assume that if a parent is engaged in another activity, the child can "do something" on a mobile phone or a tablet near him/her. By contrast, PCs or laptops usually have their given place. Although a laptop is logically also portable thanks to its construction, we do not believe that the child moves with it around the apartment, or that parents actively carry it to their child.

Table 6

Types of activities that children do on a computer/tablet

Type of activity		*Absolute frequency/n = 251*
Playing games	180	0.717
Playing online games	34	0.135
Watching YouTube videos	117	0.466
I do not know	65	0.259
Other	11	0.043

According to educators, the content of media consumption in pre-school children is often games and watching videos on YouTube. The risks include not only the fact that the child may accidentally click his/her way through to the content that is inappropriate for him/her, but also that watching even seemingly harmless videos can have a demonstrably negative effect on his/her development (Janiš Jr. & Kocourková, 2019). In our opinion, an early start to media education is an absolute necessity. As mentioned above, there is a significant percentage of parents who do not know how to deal with this on their own. In our opinion, as a result, the role of nurseries is crucial. Teachers (educator) should not only have appropriate competencies to implement media education, but should also be familiar with the "media environment" in which the children operate (i.e. know what children prefer, be familiar with the applications used, etc.). We are aware of the fact that this places high demands on the teacher, but it is not possible to argue that there is no space for it, and so on. It is an area whose importance is constantly growing and the reaction of the school must not be left behind.
What we also perceive as an important finding, which was also reflected in this item, is that some educators do not know, that is, do not seek information about children's media behaviour and experiences.

Table 7

Possession of a mobile phone by a child

Possession of a mobile phone		
Yes	44	0.175
No	107	0.426
I do not know about it	100	0.398
Total	251	1.000

The last one of the introductory tables (Table 7) only illustrates the above stated. Progress can be neither stopped nor denied; it is necessary to perceive reality and face it.
As for the cooperation between the nursery schools and children's parents, we aimed to discover whether they communicate with the parents about media issues.

Table 8

Targeted communication with parents about the media

Communication with parents about media		
Yes, we have a positive response, parents welcome it	40	0.159
Yes, but we have a negative response (parents perceive it as control and restriction)	20	0.080
No, but we consider it	102	0.406

No and we do not consider it	89	0.355
Total	251	1.000

The results in Table 8 prove that communication with parents on the topic of media is rather marginal. It is a fact that 76.1% of teachers stated that they do not communicate with the parents on the topic of media in a targeted manner. Why they do not want to communicate with parents about the media issues is currently the subject of a further research. We can only speculate about the possible reasons: "Do teachers consider themselves (in)competent? Do they consider the topic of media education to be an important area?"
This is in stark contrast to the above stated data, which assume this necessity. The fact that children are growing up in a media (digital) world is not a state that has now emerged; it has been a continuous development for some time and the response from the point of view of pre-school institutions is insufficient in this respect. However, in order to defend educators, it is also necessary to say that they do not have enough support to do so, which some teachers would appreciate, based on the findings of our research.

Table 9

Form of communication with parents on the topic of media education

Form of communication		*Absolute frequency/n = 60*
Personal conversation with the parent	48	0.8
Personal communication with a group of parents	24	0.4
Information on the notice board	18	0.3
Information on the school website	13	0.217
Information leaflets	10	0.167
Other	5	0.083

It is clear from the table that teachers most often use a personal conversation with a particular parent; we can estimate that this happens in the case of a specific situation or a problem. In the frame of this topic, communication with a group of parents is used very little, which indicates a low occurrence of activities such as seminars, workshops, discussions, etc. on the given topic. We see the reason in the small emphasis on the importance of media education in pre-school age again. (Only 69.3% of respondents believe that the topic of media education in the nursery is significant.)

Table 10

Contact with parents via social networks

Communication via social networks		
Yes	94	0.375
No	154	0.614
No, but we consider it	3	0.398
Total	251	1.386

We were also interested in whether the school is in contact with parents via social networks; in other words, whether it itself uses digital media in communication. Only 37.5% of teachers confirmed this fact. Educators are often reserved and have unnecessary concerns about this way of communication.
Although we are aware of all possible risks of social networks, we consider them to be an important present-day communication tool, which, in some respect, can be the fastest tool (apart from phone calls) - for the purpose of sharing information, video conferencing, video calls, private messages, etc. Of course, it is not possible to predict a change of posts, but the share of those who do not communicate via social networks and do not even consider it is significant, not negligible. We believe that this fact needs to be changed in relation to both communication as well as cooperation in general, and in relation to media education.
However, it is a fact that even here educators are not given sufficient support to explain the possibilities/benefits and risks of various communication platforms.

3 Discussion

In this part of the paper, we would like to list a few selected scale items on which the teachers were to comment and which directly or indirectly complete the picture of the situation of cooperation or its importance in the nursery school.

Table 11

Selected scale items

	1	*2*	*3*	*4*	*5*	
Prevention in the area of possible negative influence of mass media is sufficient in the Czech Republic.	002	0.06	0.29	0.42	0.21	1
Education of nursery school teachers is sufficient in the given topic.	0.04	0.21	0.26	0.36	0.13	1
I believe that some of the problem behaviours that occur in our nursery school are caused by the child's inappropriate access to the mass media.	0.15	0.4	0.25	0.16	0.04	1

Working with parents in this area/with this topic is challenging for me.	0.08	0.28	0.37	0.22	0.05	1
Primary prevention of the negative effect of the mass media is sufficient in our nursery school.	0.09	0.39	0.28	0.2	0.04	1
It is difficult for me to be aware of all the games or films that children are talking about.	0.27	0.37	0.15	0.16	0.05	1
Children are usually excluded from the group of others in connection with the mass media (they do not have a tablet, do not know a game, have not seen a film, etc.).	0.03	0.15	0.16	0.35	0.31	1

The values in the table are given as a percentage: 1 - strongly agree, 2 - agree, 3 - unresolved opinion, 4 - rather disagree, 5 - disagree.

A total of 63% of respondents are of the opinion that the situation in prevention of possible negative influence of mass media is not sufficient in the Czech Republic. Despite that, 48% of respondents believe that it is sufficient within their nursery. However, the rest of the data obtained are not consistent with this statement (e.g. the fact that 76.1% of respondents do not communicate with the children's parents about the topic of media). In the context of the above tables, we get into a situation where some statements are fundamentally contradictory. It is difficult to say what causes this discrepancy. Teachers probably do not perceive the full breadth of media education and its connection with the primary prevention of the negative effects of the mass media. They realize that primary prevention "must" be addressed, but they may perceive the area of media education in a detached way. This actual fact surprised us and it will require further specifying survey effort. The actual evaluation of the difficulty of communication in the field of media education with the family is related to this. It was probably difficult for educators to assess this scale, as in reality, many of them do not communicate with children's families on this topic.

In the item focused on finding out whether educators observe the connection between the negative effect of mass media and problematic behaviour of children, but no significant polarities were manifested. We attribute this to the fact that it is not a "mass" phenomenon, but these are often individual cases that are dealt with in practice.

We perceive positively the finding that children are not excluded from the collective of other children in connection with mass media, even though we expected the predominance of the opposite exerience.

Our assumption has been confirmed in the survey. First, the teachers themselves perceive their support in the topic of media education as insufficient. Second, as we expected, it is difficult for many educators to know all games, films or applications that children use.

Conclusion

In this paper, we tried to reflect on the importance of cooperation between nursery schools and families in the field of media education and present the partial findings of our research in this area. Our starting point was the presented models of cooperation and the assumption of the highest effectiveness of cooperation (also in the topic of media education) within the educational model. Reflecting on these models and the obtained data, it can be assumed that the above unfortunately does not suggest the existence of an "educational partnership" between families and schools. Media education is often not perceived as a key educational topic. Some educators do not have appropriate competencies and they also lack significant institutional support for the development of these competencies. The educators themselves are usually aware of this.

To conclude, the situation is not very optimistic. Unfortunately, as we assumed in the introduction, the system's response lags behind the social needs. In our opinion, what needs to be changed in particular is the following:

- to pay attention to the very nature of the family-school partnerships in pre-school education institutions (self-evaluation; moving towards an educational partnership - mutual inspiration, examples of good practice, etc.);
- to be aware of the need for media education in pre-school education (especially on the part of the nurseries themselves);
- to create an offer of a quality support for teachers in this area (education, online support, etc.);
- to support teachers' learning activities (by the school headmaster),
- to apply meaningful supervision.

It would seem that it is "only" five points; however, it is five very comprehensive points that need to be reflected and implemented in practice, mainly with the help of individual partial steps.

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Acta Educationis Generalis
Volume 11, 2021, Issue 2

An Overview of Social Studies Articles in Turkey: Bibliometric Mapping Analysis

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DOI: 10.2478/atd-2021-0015

Received: July 3, 2020; received in revised form: August 28, 2020;
accepted: September 2, 2020

Abstract:
Introduction: This research applies a bibliometric analysis to articles that have been published in Turkey in the field of social studies. "Social studies" is a discipline that aims to develop a human model with certain features applicable both for researchers' own countries and globally. In this context, individuals' social, work, and domestic lives are considered fundamental. Thus, discovering the characteristics of studies on social studies could be useful to interested scholars or policy-makers for determining trends in the field.
Methods: In this context, 168 articles from the Web of Science database were analyzed in bibliometric terms. Here, the keywords "social studies teaching," or "social studies," or "social studies education" were used when searching the Web of Science database, and Turkey was selected as the study location.
Results: Results of the bibliometric analysis showed that the most productive universities in Turkey are Anadolu, Marmara, and Gazi Universities, and the most frequently used keywords on the topic are "social studies," "social studies education," and "citizenship education." Moreover, the most-used words in the manuscripts' abstracts are "level," "Turkey," "participant," and "impact." The most-cited authors (judged using co-citation analyses) are Yıldırım, Öztürk, and Creswell, and the most-cited journals (judged using co-citation analyses) are The Social Studies, Journal of Educational Psychology, and Eğitim ve Bilim.
Discussion: When the articles in the field of social studies were analyzed by years, it was seen that the first one is published in 2007 and citations have occurred since 2009. It can be understood from the research results that words such as academic success, motivation and social justice keywords also have been recently used. It is understood that most of the journals are not specific to social studies and are general educational journals.

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Limitations: The only articles examined within the scope of the study were those found in the Web of Science database. This can be considered a limitation of this research.
Conclusion: Considering that the most-cited authors, according to the results of the study, are included in the bibliographies of the studies related to this field, examining their works may be a useful guide for interested scholars. The majority of the journals included in the study were general education journals. It was also noted that the majority of the most-cited journals were based in Turkey.

Key words: social studies, bibliometric analysis, Turkey.

Introduction

The concept of "social studies" was first developed during the 19th century in the United States (Doğanay, 2008). "The primary purpose of social studies is to help young people develop the ability to make knowledgeable and rational decisions as citizens of democratic societies with cultural diversity in a mutualist world." (National Council for the Social Studies [NCSS], 2018) In this context, social studies are fundamental for raising knowledgeable citizens, who are a necessity for societies (Türk & Nalçacı, 2011; Yaşar et al., 2015). In addition, preparing children to realize their roles as citizens of the world and integrating the whole program into it are among the essential goals of social studies curricula (Seefeldt et al., 2014). Öztürk (2009) notes that the main purpose of social studies is to raise efficient citizens who can solve problems and make information-based decisions about the changing standards of their country and the world.

Social studies teaching is important for all students, so they can understand how their roles, rights, responsibilities, and actions as a citizen can affect their society (Garwood et al., 2019). Social studies courses examine people and their interactions with the environments in which they belong, in terms of time and place (Doğanay, 2008). The first social studies course was taught in the United States (Görmez, 2018). Today, social studies is one of the basic courses of primary education programs around the world (Deveci, 2005); likewise, it is an essential part of the Turkish education system (Akpınar & Kaymakcı, 2012). Social studies was included in the Turkish curriculum for the first time in 1968 (Tay & Akyürek-Tay, 2006). Öztürk (2009) defines the social studies course as "a curriculum that uses information and methods from the social studies and humanities coherently to raise efficient citizens who can make information-based decisions and solve problems in a transforming country and world". At the same time, social studies courses not only play an important role in helping students to acquire the characteristics needed to be successful in their civic lives (Eryılmaz & Çengelci-Köse, 2018), they also aim to endow students with

reasoning and creativity skills, and to provide solutions to social and personal problems (Ay-Selanik & Deveci, 2016).

When the Turkish social studies literature is examined, various content analyses studies emerge. Dilek et al. (2018) conducted a content analysis of master's theses in social studies education written between 2010 and 2017. Tarman et al. (2010) examined master's theses and doctoral dissertations in the same field written between 1994 and 2010. Their analysis found that qualitative research methods are preferred in master's theses, while qualitative, quantitative, and mixed methods approaches were the most preferred research methods in doctoral dissertations. Teachers were the most preferred individuals for the studies' sample groups. Oruç and Ulusoy (2008) argued that the theses on social studies teaching have problems and shortcomings because their research methods tend to be difficult to discern thoroughly and properly. The literature indicated that there are many eclectic, meta-synthesis and meta-analysis studies related to social studies apart from these (Güleç & Hüdavendigar, 2020; Şahin et al., 2011; Yaşar et al., 2015) that provide various pieces of information about the scholars in this field. This study, which covers articles in the Web of Science database published between 2007 and 2020, aims to introduce a different perspective on social studies by including a simultaneous bibliometric analysis.

Given the context outlined above, the study includes a simultaneous bibliometric analysis of articles about social studies. This overall analysis should prove useful for interested scholars working in the field of social studies and social studies education. This study aims to determine the annual distribution of the number of publications and citations, the universities with the most published articles, the most-used keywords, the most-used words in the articles' abstracts, the most-cited authors, and the distribution of the most-cited journals.

1 Method

1.1 Data collection

Analyses of the articles included in the study were conducted according to bibliometric analysis. In this context, information about the methods followed for the analyses is explained.

1.2 Bibliometric analysis

Articles analyzed within the scope of the study for bibliometric analysis were obtained on March 26, 2020 through the Web of Science database. The articles were taken from the Web of Science database since it is both widely used and accepted in the scientific world (Gürlen et al., 2018) and it is a high-quality database that includes SSCI, SCI-EXPANDED, A&HCI, CPCI-S, CPCI-SSH, and ESCI indices (Shen & Ho, 2020). In this direction, the keywords "social studies teaching", "social studies" and "social studies education" were used in the Web of Science database and Turkey was selected for the location option. In

addition, only the article button was selected for the filtration options. Moreover, education category was selected for the articles that were obtained from the search results. Through this search, 168 articles published between 2007 and 2020 were acquired for the bibliometric analysis.
VOSviewer software program developed by Van Eck and Waltman (2010) was utilized for bibliometric analysis of the articles obtained within the scope of the study. Bibliometric analysis was used to form the bibliometric networks of correlating publications and to create a visual of the networks (Van Eck & Waltman, 2017).

2 Findings

2.1 Bibliometric findings

The total of 168 social studies articles that were published between 2007 and 2020 is illustrated according to the number of articles by year in Figure 1 and to the number of citations in Figure 2. It is seen that 3 of the studies in the field of social studies were published in 2020, 28 in 2019, 18 in 2018, 16 in 2017, 21 in 2016, 11 in 2015, 6 in 2014, 11 in 2013, 15 in 2012, 12 in 2011, 12 in 2010, 5 in 2009, 8 in 2008 and 2 in 2007, respectively. The oldest article in the Web of Science database in the field of social studies in Turkey is published in 2007, however, the frequency began to increase in 2013, which is shown in Figure 2. Also, the top three universities where these articles published are Anadolu University (f=18), Marmara University (f=16) and Gazi University (f=13).

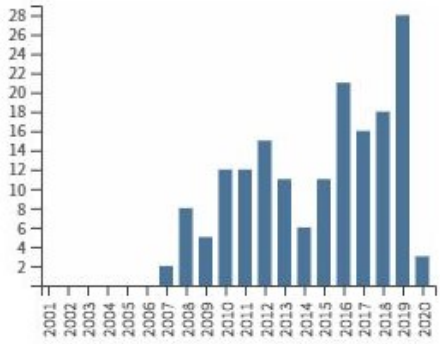

Figure 1. Publications by years.

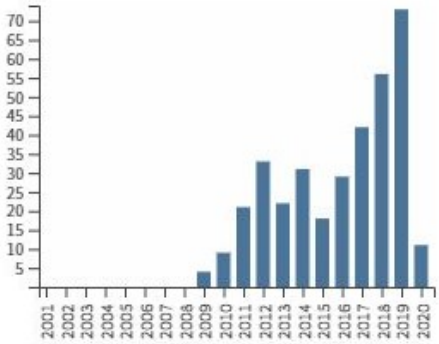

Figure 2. Citations by years.

2.2 Key words

VOSviewer program was utilized to reveal the map of the most used keywords in the articles that were written in the field of social studies. The minimum number of repetitions of a keyword was 2, and as a result, the keywords to be selected automatically was 62 in the VOSviewer program. The map formed for

the word network structure is shown in Figure 3. The analysis shows that 12 clusters were converged based on the most used keywords. Table 1 shows the top fourteen most used keywords in the research sample. The annual distribution of the keywords in the articles within the scope of the study is shown in Figure 4.

Table 1

The most used keywords

Keyword	*f*	*Keyword*	*f*
Social studies	66	Achievement	5
Social studies education	13	Education	5
Citizenship education	8	Prospective teachers	5
Turkey	7	Primary school education	4
Value	6	Social studies teacher	4
Values education	6	Metaphor	4
Teacher training	6	Qualitative research	4

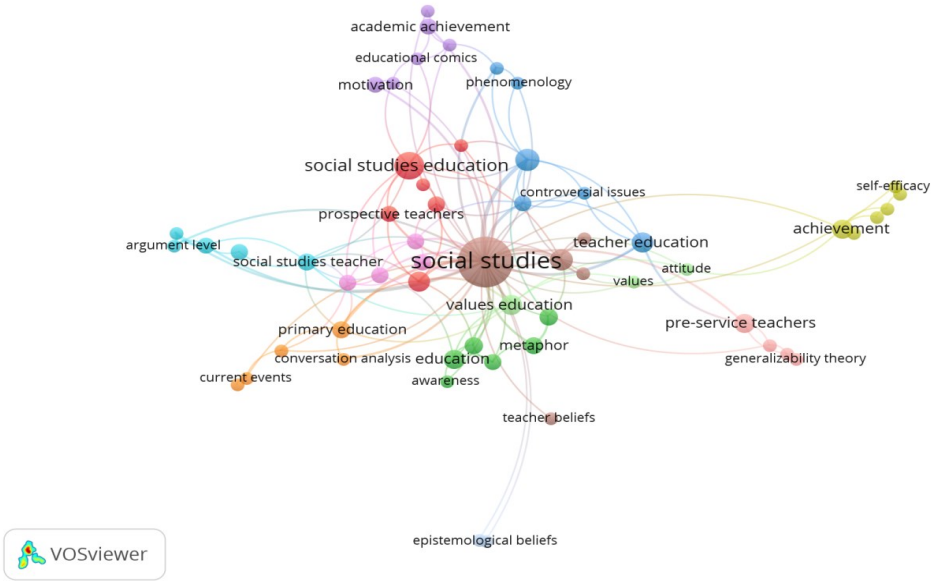

Figure 3. The most-used keywords in social studies articles.

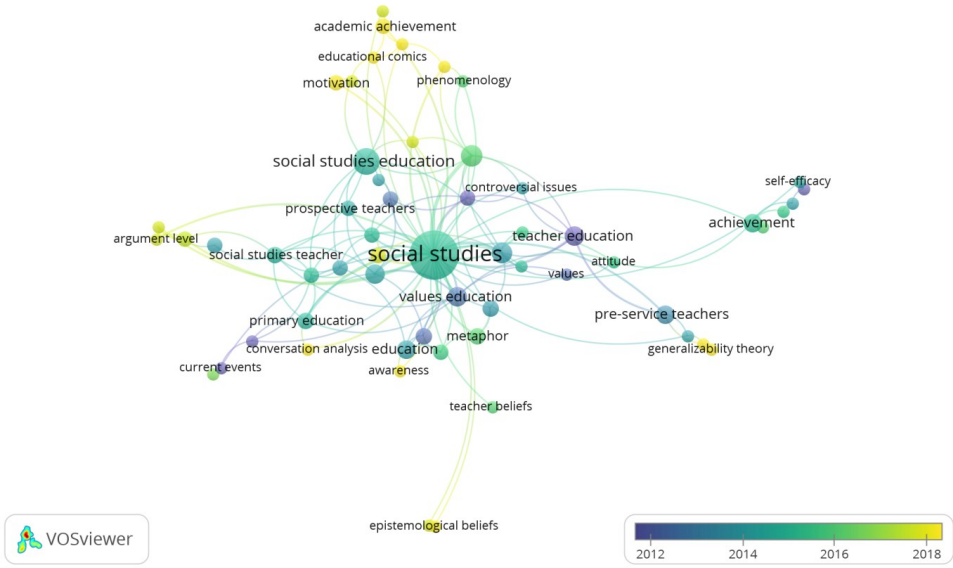

Figure 4. Distribution of the most-used keywords in the articles by years.

2.3 The most-cited authors

A co-citation analysis was performed to identify the authors cited most often in the bibliographies of the articles returned from the Web of Science database. A network map of 25 authors receiving at least 13 citations is shown in Figure 5. The network map consists of four clusters, which are colored yellow, red, blue, and green. The most-cited authors within the research sample are: Ali Yıldırım (62 citations), Cemil Öztürk (42 citations), John W. Creswell (39 citations), Şener Büyüköztürk (37 citations), Matthew B. Miles (35 citations), Ahmet Doğanay (27 citations), Arife Figen Ersoy (20 citations), and Niyazi Karasar (20 citations).

Then, a citation analysis was conducted for the most-cited authors. The filtering conditions called for an author to have at least two articles cited in at least two citations. Under these conditions, 27 authors were selected. The network map for this analysis appears in Figure 6. The 27 authors selected for the analysis are shown in Table 2.

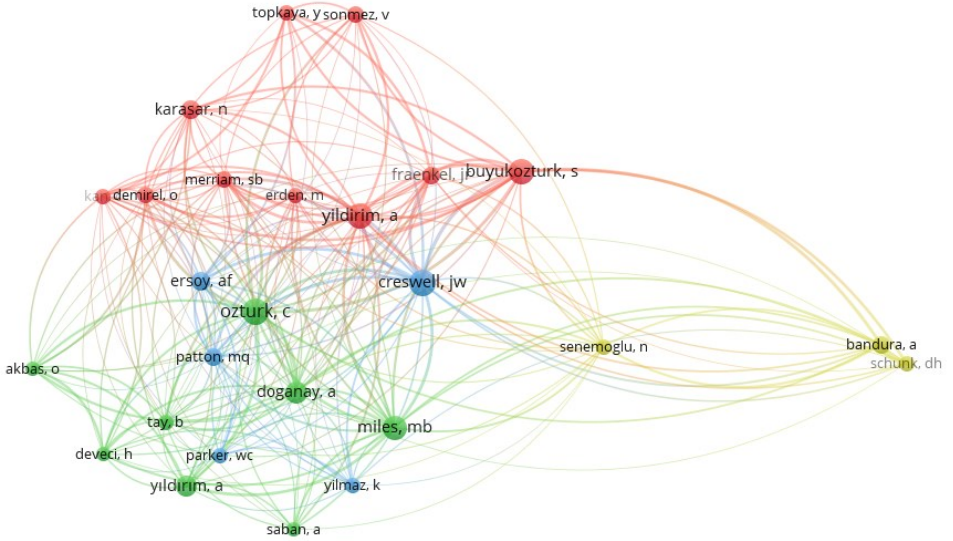

Figure 5. The most-cited authors (co-citation Analysis).

Figure 6. The most-cited authors (citation Analysis).

Table 2

The most-cited authors (citation analysis)

Author	*Number of articles*	*Citations*	*Author*	*Number of articles*	*Citations*
Ersoy, A. F.	6	30	Kartal, A.	2	4
Yılmaz, K.	5	25	Merey, Z.	2	4
Çengelci, T.	2	10	Dinç, E.	4	3
Yazıcı, K.	2	10	Dündar, Ş.	2	3
Deveci, H.	4	8	Kaymakcı, S.	3	2
Katılmış, A.	2	8	Kesten, A.	2	2
Tarman, B.	3	8	Topkaya, Y.	2	2
Öztürk, C.	4	7	Torun, F.	2	2
Sağlam, H. İ.	2	7	İlhan, G. O.	2	2
İlter, İ.	4	7	Aslan, S.	2	2
Tay, B.	3	6	Meral, E.	2	2
Açıkalın, M.	2	6	Uslu, S.	2	2
Gökçe, N.	2	6	Uztemur, S.	2	2
Çalışkan, H.	2	4			

2.4 The most-cited journal (citation and co-citation analysis)

A citation analysis was applied to the articles. The criteria called for a minimum of five selected articles from a journal, and each article had to have a minimum of one citation. Based on these results, seven journals were returned. The citation network map for these journals is shown in Figure 7. The most-cited journals were Kuram ve Uygulamada Eğitim Bilimleri (76 citations, 33 articles), Eğitim ve Bilim (68 citations, 31 articles), Eurasian Journal of Educational Research (25 citations, 16 articles), Hacettepe Eğitim Fakültesi Dergisi (11 citations, 14 articles), Australian Journal of Teacher Education (6 citations, 5 articles), Journal of Education and Future (5 citations, 9 articles), and Pegem Eğitim ve Öğretim Dergisi (2 citations, 9 articles).

In addition, a co-citation analysis was conducted for the journals. For it, we determined that a journal should have at least 22 citations, and 22 journals were returned. The map formed based on this analysis is shown in Figure 8. The most-cited journals were: The Social Studies (64 co-citations), Journal of Educational Psychology (56 co-citations), Eğitim ve Bilim (53 co-citations), Hacettepe Eğitim Fakültesi Dergisi (51 co-citations), Computers & Education (45 co-citations), Değerler Eğitimi Dergisi (44 co-citations), and Educational Leadership (37 co-citations).

Figure 7. The most-cited journals (citation analysis).

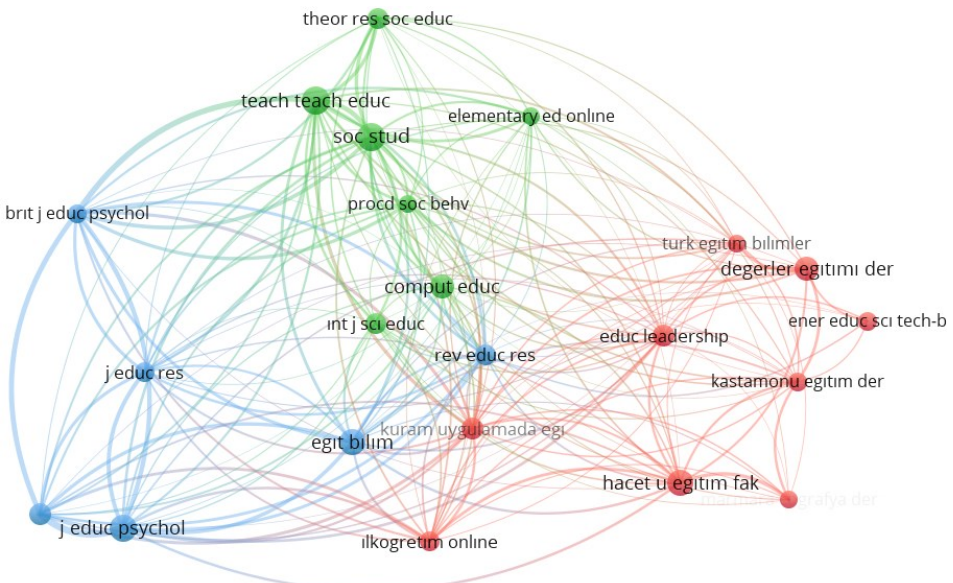

Figure 8. The most-cited journals (co-citation analysis).

2.5 The most-used words in abstract sections

The words most often used in the articles' abstracts were analyzed as part of the study, and a map was made depicting them. For this task, the minimum number of repetitions of a word was set to 10; 62 words were returned from the analysis. The map is shown in Figure 9. On the map, three clusters emerged, colored as green, blue, and red. The most frequently used words in the articles' abstracts were: level (f=55), Turkey (f=48), participant (f=46), impact (f=38), interview (f=36), process (f=35), program (f=35), social studies course (f=35), and scale (f=31). The distribution of the most used words in the abstracts of the articles by years covered in the study is shown in Figure 10.

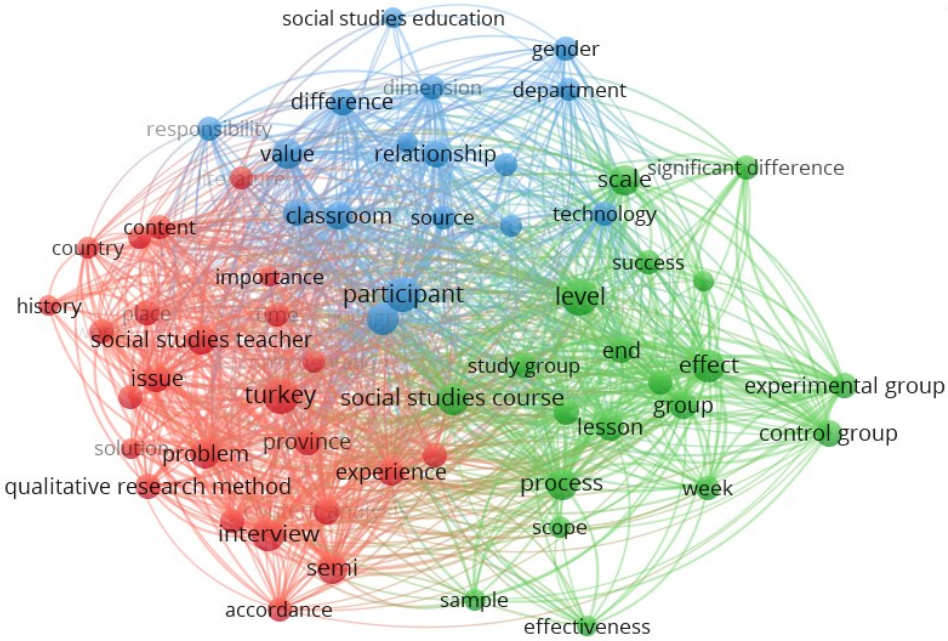

Figure 9. The most-used words in article abstracts.

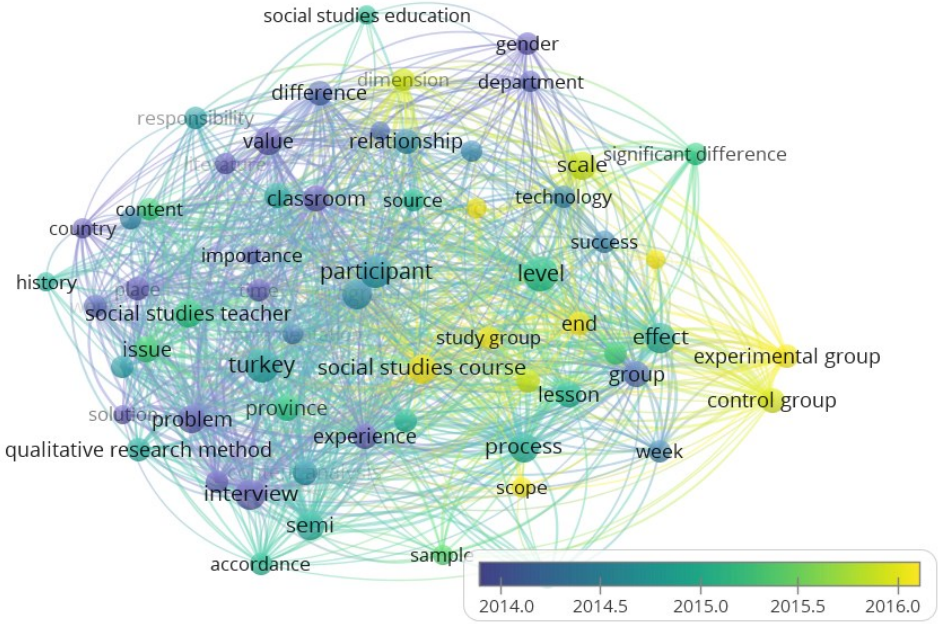

Figure 10. Distribution of the most-used words in article abstracts by years.

3 Discussion

This study was conducted to reveal the bibliometric features of the articles in the field of social studies. In this context, a bibliometric analysis was performed on 168 articles. The analysis revealed that the articles were produced mostly at Anadolu, Marmara, and Gazi Universities. When the articles were analyzed by year of publication, we noted that the first was published in 2007, and that article was first cited in 2009. We believe that the reasons are the foundation of the Turkish Social Studies Education, in 1997, and the increase in academic staff with the opening of social studies departments in different cities since 2005 (Tarman et al., 2010). It is also important to note that social studies education has not been practiced for as long in Turkey as other departments have been in operation (Oruç & Ulusoy, 2008). Finally, the fact that the Web of Science database contained article from only 50 countries in 2003 and 74 countries in 2005, but had grown to 90 countries by 2008, was a factor in this increase rate of research (Clarivate Analytics, 2020). When the numbers of articles were examined, we found that the greatest number of them were published in 2019.

The articles' most-used keywords were also analyzed. Keywords are an important theme in bibliometric analysis (Wang & Chai, 2018). Our results show that the most-used keywords in social studies are "social studies," "social studies education," and "citizenship education." In addition to these words, it can be said that the use of the word value in keywords is due to a lot of publications about value (Čepelová & Barnová, 2020). The frequency of the keywords' use

also provides an overview of research trends in the field (Huai & Chai, 2016). In addition, since the keywords help indexes and search engines to find relevant articles, choosing the right keyword leads to more citations of a given study. The keywords used should be specific to both the content of the article and its area or sub-domains (Springer, 2020).

The authors who received the most citations were Ali Yıldırım, Cemil Öztürk, John W. Creswell, Şener Büyüköztürk, Matthew B. Miles, Ahmet Doğanay, and Arife Figen Ersoy, based on our co-citation analysis. The most-cited authors were Arife Figen Ersoy, Kaya Yılmaz, Tuba Çengelci, Kubilay Yazıcı, Handan Deveci, and Ahmet Katılmış, according to the citation analysis. The most-cited journals were Kuram ve Uygulamada Eğitim Bilimleri, Eğitim ve Bilim, and the Eurasian Journal of Educational Research, in the citation analysis, and the most-cited journals in the co-citation analysis were The Social Studies, Journal of Educational Psychology, and Eğitim ve Bilim. The Turkey-based journals among these have good qualification indexes and are regarded as the best journals in Turkey, given the indexes in which they are included. Most of the journals noted here are not specific to social studies, but instead are general educational journals. Lv et al. (2011) highlighted that it is important to identify the most-cited studies in a given field.

4 Limitations

The only articles examined in this study are those that appear in the Web of Science database and which were conducted in Turkey. These can be considered limitations of the study.

Conclusion

In the light of the results of this study, several suggestions can be presented:

The articles retrieved in the study were selected from the Web of Science database, and bibliometric analyses were performed. Thorough analyses can also be performed using different databases and variables.

Considering that the most-cited authors according to the study's results are included in many of the bibliographies of studies related to this field, examining these authors' works may be useful for interested scholars.

A majority of the journals included in this study were general education journals. A future study might consider only journals that publish social studies articles.

The majority of the most-cited journals in this study are based in Turkey. Researchers carrying out similar studies might opt to examine journals with a different country of origin.

The recently used keywords related to the field of social studies can be examined to plan future studies. For example, trends can be determined by comparing recently used keywords with relevant studies in other countries.

For future studies' meta-analyses, a meta-synthesis or compilation of social studies articles would be suitable. Such studies are important, in terms of providing a general perspective for interested scholars.

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Acta Educationis Generalis
Volume 11, 2021, Issue 2

Metaphoric Perceptions of Preschool Teachers towards Inclusive Education

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DOI: 10.2478/atd-2021-0016

Received: August 12, 2020; received in revised form: December 27, 2020; accepted: January 8, 2021

Abstract:
Introduction: The purpose of this study is to determine the metaphorical perceptions of preschool teachers in regard with the concept of inclusive education.
Methods: In this study, phenomenology design, which is one of the qualitative research methods, was used. The study group of this research consists of preschool teachers, who have students either received or currently receiving inclusive education in their classrooms. In the research, the content analysis was conducted in order to analyze the data obtained from preschool teachers.
Results: Of the 113 preschool teachers participated in the study, the answers given by 101 teachers to the research question were included in the evaluation. At the end of the evaluation phase, it was determined that preschool teachers developed a total of 53 different metaphors in regard with the concept of inclusive education and 53 valid metaphors developed by preschool teachers were analyzed by gathering them under 9 different categories according to their common characteristics.
Discussion: In accordance with the data obtained from the research, the distribution of metaphors developed by preschool teachers regarding the concept of "inclusive education" by categories is observed as follows: inclusive education as the riches of nature, inclusive education depending on the soil and inclusive education as work and living areas. However, the metaphor of the "rainbow" draws attention as the most developed metaphor for inclusive education in all categories by the participants.
Limitations: Due to the COVID-19 virus pandemic, data were collected from participants using an online interview form.
Conclusion: The study also concluded that the perceptions of the participants towards inclusive education were generally positive.

Key words: preschool, inclusive education, metaphor, perception.

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Introduction

Resilient individuals are able to overcome adverse situations, they actively seek and use help from their social environment and take advantage of various social relationships available to them (Barnová & Tamášová, 2018). Inclusive education refers to special education practices based on the principle that individuals, who need special education, should continue their education both in public and private preschools, primary and secondary education institutions as well as non-formal education institutions with their peers, who have no disabilities (Batu & Kırcaali-İftar, 2007). Guralnick (2001) and Salisbury (1990) define inclusion as a planned, developed and conceptualized value that clearly demonstrates the education and development of young children. Inclusive education refers to an educational model where in students with special needs attend general education classes and receive appropriate special education support (Bender, Vail, & Scott, 1995). The main concept of inclusion is providing the special education services to individuals, who need special education, ensuring that they attend the same school and classroom with their peers at the same age (York & Tundidor, 1995; as cited in Kargın, 2004). Today, the concept of inclusive education has become widespread due to the need for equal opportunities in education, full participation, independent life and economic self-efficacy (Cohen, 2009; Turnbull et al., 2013; as cited in Gürgür & Hasanoğlu-Yazçayır, 2019). There are researches demonstrating the effective factors in the expansion of inclusive education and its positive outcomes (Tideman, 2015; Mitchell, 2008; Corbett, 2001).

As a result of the developments in human rights and special education fields all over the world in the 1960s, as the idea that children with special needs attend general education schools with their peers become widespread, these rights were secured with the agreements signed in the international area. This concept, which was initially called as inclusive education in the early days, has also started to be expressed with the concept of integration (ERG, 2011). The Special Education World Conference was held in Salamanca, attended by more than 300 people from 92 states and 25 international organizations in 1994. The conference aimed to develop the integration approach in line with the goal of "education for all" and take the necessary political steps to ensure that schools serve all children, especially children with special needs (UNESCO, 1994; as cited in Dede, 1996). 10 years after UNESCO's "education for all" movement started in 1990, the World Education Forum was organized in Dakar, Senegal in order to evaluate what was carried out during this period. In the forum, it was determined that the goal of “education for all” could not be achieved at the desired level, The Dakar Framework for Action, which includes the things to be done to achieve this goal, was adopted. The framework governments have been obliged to provide quality basic education for everyone until 2015 (Inclusion International, 2009). The right to receive education through integration

(inclusion) is guaranteed in international law with the 24th article of the United Nations Convention on the Rights of Persons with Disabilities (CRPD), which was adopted in the United Nations General Assembly in 2006, (CRPD, 2011). It is possible to come across studies that can be shown as remarkable in terms of inclusive (integration) education in the world. Early special education services, which began in Sweden in 1952 with the visits of the families of children with developmental retardation by nurses, were further expanded in 1981 with the prevention programs carried out as a result of the announcement of "Swedish National Health and Welfare". In 2001, children with disabilities were provided with education in a preschool institution, where integration studies were applied (Choi, 2002; as cited in Pınar-Sazak, 2006). In Germany, while debates about equal education opportunities continued in the 1960s and 1970s, initiatives for special education and early childhood special education first started for children with speech disorders and hearing impairments (Opp &Thurmair, 1993). With the laws that came into force in Italy in 1971, England in 1974, America and France in 1975 and Norway in 1976, it was legally accepted that students with special needs should be educated in general education classes with their peers (OECD, 1995; as cited in Sucuoğlu & Kargın, 2010). Even though preschool inclusion has been implemented worldwide for a long time, in Turkey, the efforts in regard with laws and regulations about the issue, support programs regarding the preschool inclusion and teaching in the natural environment have been observed in recent years (Diken et al., 2016).

Preschool education is defined as an educational process including childhood years from birth to the beginning of primary school that provides rich stimulating environment opportunities suitable for the mental characteristics and development levels of children and directs their development in the best way in line with the cultural values of the society (Oğuzkan & Oral, 1995). Inclusive education has a great importance in preschool education, which is one of the most critical periods of life in terms of gaining basic communication skills and accelerating the development of children with special needs in order to facilitate their integration into society in the following years (Gampel, Gottlieb, & Harrison, 1974; Metin, 1992). With the inclusion programs implemented in this period, the child with special needs will have the opportunity to experience the gains he/she has acquired with his/her peers and he/she will take his/her peers as an example with the friendships established (Shickedanz, 1994; as cited in Özdemir, 2010).

Providing education to individuals with special needs during preschool period allows their developmental disabilities to be supported at an early age. Preschool education is very important in terms of creating significant differences in the growth and development of the child with special needs. Education provided in these years improves the mental and social development of the children and helps reducing their behavioural problems (Zigmond, Kloo, & Volonino, 2009; Aral, 2011; Koçyiğit, 2015). Besides, the participation of a child with special

needs in the group of friends at school contributes to the development of the child's self-confidence (Karadeniz, 2002).

As in all over the world, the importance given to inclusive education during a preschool level in Turkey is increasing each passing day. Undoubtedly, the quality of education provided to children with special needs during preschool education is closely related to how teachers perceive and shape the concept of inclusive education in their minds. In this respect, teachers are the ones who will add spirit and give life to the studies related to inclusive education. Therefore, revealing the metaphorical perspectives and perceptions of teachers on the subject has become the main topic of the research. It is very important for teacher candidates to use metaphors to get to know and explain themselves (Tannehill & MacPhail, 2014). Metaphor is a way of defining an event, concept, or phenomenon with the same characteristics by comparing it with another event, concept and phenomenon (Wehmeier, 1993). Metaphor provides a powerful way to understand experiences and explore roles in experiences (Goldstein, 2005). In other words, metaphor is a type of figurative language used to compare objects with similar properties (Stockton, 2017). As Lakoff and Johnson (2010) point out, metaphor has been seen not only as linguistic, but also as a much broader concept that affects thinking and action processes of people. Metaphors are also mental tools that individuals can use to understand and explain abstract and complex facts (Drakenberg & Malmgren, 2012).

Even though no other research has been found at the national and international level examining the metaphoric perceptions of teachers towards the concept of inclusive education in preschool education, some studies using metaphors in preschool education (Duran & Dağlıoğlu, 2017; Talas, 2017; Uçuş, 2016; Zembat, İlknur- Tunçeli, & Akşin, 2015; Giren & Durak, 2015; Hannu et al., 2012; Salisbury, 1991; Odom & McEvoy,1990) were found in the relevant literature both nationally and internationally.

The aim of this study is to determine the metaphorical perceptions of preschool teachers regarding the concept of inclusive education. Accordingly, answers to the following questions were sought.

- Which metaphors do the preschool teachers usually use in order to explain their perceptions about the concept of inclusive education?
- Under which categories are the metaphors of preschool teachers regarding the concept of inclusive education gathered together according to their common characteristics?

1 Method

In this study, which examined the metaphors of preschool teachers regarding the concept of inclusive education, phenomenology pattern, which is one of the qualitative research approaches, was employed. The purpose of using this pattern is that it creates a suitable basis for focusing on the facts that we are aware of in our daily lives but do not have an in-depth and detailed

understanding. However, these facts may appear in various ways, such as events, experiences, perceptions, concepts and situations (Büyüköztürk et al., 2011; Yıldırım & Şimşek, 2011). The main purpose of phenomenology studies is to take personal experiences related to a phenomenon to a more general level (Creswell, 2007).

1.1 Study group

The study group of this research consists of preschool teachers, who have students either received or currently receiving inclusive education in their classrooms, working in public schools in a province in Turkey in the academic year 2019-2020.

1.2 Data collection

While creating the data collection tool of the research, the relevant studies using metaphors as a tool to reveal the perceptions of individuals have been examined (Yazıcı et al., 2018; Duran & Dağlıoğlu, 2017; Uçuş, 2016; Akgün, 2016; Zembat, Tuçeli, & Akşin, 2015; Guerrero & Villamil, 2002). A semi-structured form that is written in the format of "Inclusive education is similar to/like ……. because….." was given to preschool teachers in order to collect their metaphors regarding the concept of inclusive education. Preschool teachers were asked to write their metaphors about the concept of inclusive education with their reasons. In the studies, where metaphor is used as a research tool, the relationship between the subject and the source of the metaphor is tried to be determined by the word "like", while the meaning and reason attached to this metaphor is tried to be explained by the word "because" (Saban, 2008). The data obtained from here constituted the main data source of the research.

1.3 Data analysis

In the research, the content analysis was conducted in order to analyze the data obtained from preschool teachers. The main operations performed in the content analysis are gathering data that are similar in various aspects under certain concepts and themes, organizing and interpreting this data in a way that the readers can easily understand (Yıldırım & Şimşek, 2011). In this process, the metaphors obtained from preschool teachers were evaluated by taking various stages used by Saban (2009) into account. First, the metaphors developed by preschool teachers in regard with inclusive education were arranged in alphabetical order at the naming stage. Then, in the second stage, which is the classification/screening phase, the relationship between the subject and the source of the metaphor was examined by reviewing each metaphor separately and attention was paid to make this relationship significant. As a result of this review, it was revealed that not all teachers were able to create valid metaphors. Some answers that do not contain any metaphor sources, where the reason for the metaphor are not presented, the definition of inclusive education is

described, or the types of inclusion explained (inclusive education is similar to wind, because …. or inclusive education may be full-time or part-time) were not included in the evaluation. After this elimination, of the 113 preschool teachers participated in the study, the answers given by 101 teachers to the research question in regard with the concept of metaphor were included in the evaluation, these teachers produced 53 different metaphors in regard with the concept of inclusive education. Then, in the third stage, which is the category development phase, 53 valid metaphors developed by preschool teachers were analyzed by gathering them under 9 different categories according to their common characteristics. In the final stage indicated by Saban (2009), the validity and reliability stage of the study was taken into consideration. Expert opinion was consulted for the reliability of the study in order to determine whether the metaphors presented under the conceptual categories obtained represent the relevant category. Two experts in total, one from the department of preschool education and one from the education programs and teaching department, were consulted in regard with all metaphors (n=53) and categories (n=9) created and the eligibility of these metaphors placed under the categories to represent the relevant categories was evaluated by making comparisons in accordance with expert opinions. The reliability of the data analysis was calculated using Reliability = Consensus \ [Consensus + Disagreement] X 100 formula of Miles & Huberman (1994) and the reliability value was determined as 90%. Then, percentage (%) and number of participants (f) were calculated after transferring the data to the computer environment.

2 Findings

In this part of the study, the metaphors that preschool teachers developed in regard with the concept of inclusive education were presented below two main titles. These titles are as follows: “Metaphors developed by preschool teachers regarding inclusive education” and “Metaphor categories developed by preschool teachers regarding inclusive education”.

Table 1

Metaphors developed by preschool teachers regarding inclusive education

Metaphors Developed	*f*	*%*	*Metaphors Developed*	*f*	*%*
1. Garden	1	0.99	28. Coincidences	1	0.99
2. Play dough	1	0.99	29. Branch of a tree	1	0.99
3. Rainbow	12	11.88	30. Puzzle	1	0.99
4. Breath	1	0.99	31. Ladder	1	0.99
5. The Sun	7	6.93	32. Light in the dark	1	0.99
6. Oxygen	1	0.99	33. Taking a Step	1	0.99
7. Choir	1	0.99	34. Embroidery	1	0.99
8. Life Ring	1	0.99	35. Music	1	0.99

9. Mother	1	0.99	36. To Soil	1	0.99
10. Life in a foreign land	1	0.99	37. Scale	1	0.99
11. Art	1	0.99	38. To Fingers	2	1.98
12. Raising a baby	8	7.92	39. Justice	1	0.99
13. The long way	1	0.99	40. Unnecessary work	3	2.97
14. Gardener	10	9.90	41. Private school	1	0.99
15. Flower	1	0.99	42. Compass	2	1.98
16. Water	2	1.98	43. Prosthetic foot	1	0.99
17. Game	1	0.99	44. Polar star	1	0.99
18. Book	1	0.99	45. Stale bread	1	0.99
19. Winter salad	1	0.99	46. Mining	1	0.99
20. Iron forging	1	0.99	47. Orchestra	9	8.91
21. Freak	1	0.99	48. Day and night	1	0.99
22. Dessert	1	0.99	49. Seed	3	2.97
23. Salt	1	0.99	50. Body organs	1	0.99
24. Life	1	0.99	51. Dream	1	0.99
25. Walker	1	0.99	52. Rebirth	1	0.99
26. Pen	1	0.99	53. Tree	1	0.99
27. Egg	1	0.99			

Considering the data given in Table 1, it is seen that preschool teachers created 53 different metaphors in regard with the concept of inclusive education. It is observed that 11.88% (f=12) of the respondents participating in the study considered inclusive education similar to a “rainbow”. They stated that each color on the rainbow reflects individual differences of the students. It is observed that 9.90% (f=10) of the participants considered inclusive education similar to "gardening". Preschool teachers stated that, unlike other education models, inclusive education is a kind of education that requires special attention and sensitivity, like growing a flower. In addition, 8.91% (f=9) of the participants considered inclusive education similar to an "orchestra". They emphasized that inclusive education should be in harmony with each other like sounds and music in an orchestra. Apart from these, the most common metaphors used by preschool teachers for inclusive education are as follows: “raising a baby” with 7.92% (f=8), "sun" 6.93% (f=7), "seed" 2.97% (f=3), " unnecessary work" 2.97% (f=3), "water" 1.98% (f=2), "finger" 1.98% (f=2), "compass" 1.98% (f=2), respectively. It is noteworthy that 2.97% (f=3) of preschool teachers consider inclusive education as an “unnecessary work”.

In Table 2, metaphor categories developed by preschool teachers regarding inclusive education are given.

Table 2

Metaphor categories developed by preschool teachers regarding inclusive education

Categories	*Metaphors*	*N*	*f*	*%*
Inclusive education as the riches of nature	Rainbow (12), Sun (7), Polar star (1), Night-Day (1)	4	21	20.79
Inclusive education as the rhythm of art	Art (1), Choir (1), Music (1), Orchestra (9),	4	12	11.88
Indispensable inclusive education	Water (2), Mother (1), Breath (1), Body organs (1), Fingers (2), Oxygen (1)	6	8	7.92
Inclusive education as food and drink	Stale bread (1), Winder salad (1), Dessert (1), Egg (1), Salt (1)	5	5	4.95
Inclusive education depending on soil	Garden (1), Gardener (10), Tree (1), Branch of a tree (1), Seed (3), Soil (1), Flower (1)	7	18	17.82
Inclusive education as a tool and equipment	Life ring (1), Walker (1), Pen (1), Book (1), Puzzle (1), Ladder (1) Scale (1), Compass (2), Prosthetic foot (1), Play dough (1), Embroidery (1)	11	12	11.88
Inclusive education as a work and living area	Raising a baby (8), Life in a foreign land (1), Iron forging (1), Life (1), Private school (1), Mining (1), Game (1)	7	14	13.86
Inclusive education as other expressions	Coincidences (1), Light in the dark (1), Taking a Step (1), Dream (1), Justice (1), Rebirth (1), Long way (1)	7	7	6.93
Inclusive education as an expression of negativity	Freak (1), Unnecessary work (3)	2	4	3.97
Total	9	53	101	100.00

According to the data given in Table 2, the metaphors developed by preschool teachers for the concept of inclusive education were gathered in 9 different categories. These categories are as follows: (1) “Inclusive education as the riches of nature”, (2) “Inclusive education as the rhythm of art”, (3) “Indispensable inclusive education”, (4) “Inclusive education as food and drink”, (5) “Inclusive education depending on soil”, (6) “Inclusive education as a tool and equipment”, (7) “Inclusive education as a work and living area”, (8) “Inclusive education as other expressions”, (9) “Inclusive education as an expression of negativity”, respectively. Furthermore, 21 teachers developed 4 different metaphors in the category of “inclusive education as the riches of nature”. It was also determined that 12 teachers developed 7 different metaphors in the category of “inclusive education as the rhythm of art”, 8 teachers developed 6 different metaphors in the category of “indispensable inclusive education”, 5 teachers developed a total of 5 different metaphors in the category of “inclusive education as food and

drink", 18 teachers developed 7 different metaphors in the category of "inclusive education depending on soil", 12 teachers developed 11 different metaphors in the category of "inclusive education as a tool and equipment", 14 teachers developed 7 different metaphors in the category of "inclusive education as a work and living area", 7 teachers developed 7 different metaphors in the category of "inclusive education as other expressions", and lastly, 4 teachers developed 2 different metaphors in the category of "inclusive education as an expression of negativity", respectively.

2.1 Category 1. Inclusive Education as the Riches of Nature

Considering the data given in Table 2, it is observed that various metaphors, such as rainbow (12), sun (7), polar star (1), night-day (1) were developed by preschool teachers in regard with inclusive education under this category. In addition, this category stands out as the category, in which the maximum number of metaphors (f: 21) was developed by teachers. Sample metaphor expressions developed by teachers related to this category are given below.

"It is similar to rainbow colours. Because each colour is beautiful by itself, but colours making up the rainbow are amazing when they come together." (T10)
"It is similar to the sun, because the sun treats everyone equally." (T2)
"Inclusive education is like a pole star, because it guides people." (T38)
"Inclusive education is like night and day. Because both are like equal halves of each other." (T60)

2.2 Category 2. Inclusive Education as the Rhythm of Art

A total of 12 participants developed 4 different metaphors for the concept of inclusive education under this category. This category consists of metaphors, such as orchestra (9), art (1), music (1), choir (1) respectively. Sample metaphor expressions developed by teachers related to this category are given below.

"Inclusive education is like an orchestra. Because different musical instruments come together and form a harmonious whole in an orchestra as in inclusive education." (T123)
"Inclusive education is like art; it gives society new works of art in different fields." (T49)
"Inclusive education is like the sound of music coming from far away. You will hear it if you listen devotionally." (T50)
"Inclusion education is similar to choir, because it is like a beautiful song created by combining different voices." (T66)

2.3 Category 3. Indispensable Inclusive Education

Under this category, participants developed 6 different metaphors regarding the game concept. This category consists of metaphors, such as water (2), finger (2), mother (1), breath (1), body organs (1), oxygen, respectively. Sample metaphor expressions developed by teachers related to this category are given below.

"It is like giving water because the inclusion student needs attention and love." (T112)
"Children are like the fingers of a hand; they are all in different sizes. But each of them is part of a wholeness." (T5)
"Inclusive education is similar to mother; because this education is like a mother's bosom." (T94)
"Inclusive education is like the organs of a body; because every individual that makes up the society is like the organs of the body." (T17)

2.4 Category 4. Inclusive Education as Food and Drink

Under this category, 5 participants developed 5 different metaphors for the concept of inclusive education. This category consists of metaphors, such as stale bread (1), winter salad (1), dessert (1), egg (1), salt (1), respectively. Sample metaphor expressions developed by teachers related to this category are given below.

"Inclusive education is like using stale breads, because stale bread is not like fresh bread." (T28)
"Inclusive education is like winter salad, because you can find something in every colour in it." (T35)
"Inclusive education is like an egg; the shell is hard, but inside is very precious and delicious." (T88)

2.5 Category 5. Inclusive Education Depending on Soil

Under this category, 18 participants developed 7 different metaphors regarding the concept of inclusive education. This category consists of metaphors, such as gardener (10), seed (3), garden (1), soil (1), tree (1), tree branch (1), flower (1), respectively. Sample metaphor expressions developed by teachers related to this category are given below.

"Inclusive education is like gardening, because it is essential to combine different flowers and create a beautiful whole." (T96)
"It is similar to the seed sown in the field, because effort spent and patience is needed to get the product." (T20)
"If inclusive education is considered as the society itself, it is like branch of a tree; because it also a part of society." (T105)

2.6 Category 6. Inclusive Education as a Tool and Equipment

Under this category, 12 participants developed 11 different metaphors regarding the concept of inclusive education. This category consists of metaphors, such as compass (2), life ring (1), walker (1), book (1), pen (1), puzzle (1) scale (1), prosthetic foot (1), ladder (1), play dough (1), and embroidery (1), respectively. Sample metaphor expressions developed by teachers related to this category are given below.

"Inclusive education is like a compass. Because our student is like a ship in a storm. Inclusive education guides him like a compass." (T30)
"It is like a life ring, which gives a student, who looks very normal from the outside, the opportunity to breathe in the classroom." (T44)
"Inclusive education is like a walker; because it ensures that the first steps are taken to adapt to society." (T59)
"Inclusive education is like a ladder; because it is like a step that provides the connection between the floors in the building." (T85)
"Inclusive education is like a prosthetic foot, because the prosthetic foot is like the real foot for those who need it". (T8)

2.7 Category 7. Inclusive Education as a Work and Living Area
Under this category, 14 participants stated that they consider inclusive education similar to 7 different metaphors. This category consists of metaphors, such as raising a baby (8), living in a foreign land (1), iron forging (1), life (1), private school (1), game (1), mining (1), respectively. Sample metaphor expressions developed by teachers related to this category are given below.
"Inclusive education is like raising a baby. Because it is a challenging journey that requires constant attention and love." (T30).
"Inclusive education is like searching for a precious metal hundreds of meters below the ground; because inclusive education is like finding the ore hidden in the soil." (T75)
"Inclusion education is like iron forging; because it is like fire that either melts or makes it an envy for everyone." (T67)

2.8 Category 8. Inclusive Education as Other Expressions
Under this category, 7 participants stated that they consider inclusive education similar to 7 different metaphors. This category consists of metaphors, such as coincidences (1), light in the dark (1), taking a step (1), dream (1), justice (1), rebirth (1), long way (1), respectively. Sample metaphor expressions developed by teachers related to this category are given below.
"Inclusive education is like light in the dark. Because the child provided with inclusive education is like a person lost his way in the dark. The inclusive education guides him by shedding light on his way." (T100)
"Inclusive education is justice; because it offers everyone the same opportunities." (T11)
"It is like taking another step, because you learn something new every day with every step." (T19)

2.9 Category 9. Inclusive Education as an Expression of Negativity
Under this category, 4 participants developed 2 different metaphors regarding the concept of inclusive education. This category consists of metaphors, such as

unnecessary work (3) and freak (1), respectively. Sample metaphor expressions developed by teachers related to this category are given below.

"It is like rowing in vain for an unnecessary work; because it is like writing on water." (T6)

"It is like a freak; because it makes no sense. The fact that educating someone, who needs to be educated in a special classroom, in the normal classroom is like pouring garlic yogurt on a sweet pastry with nuts." (T23)

3 Discussion

Even though the view that specialization and special planning is important in the education of children, who need special education, in recent times remains valid, it is increasingly accepted that they should be educated in a regular educational environment with their peers instead of completely separating them from normal children (Aral, 2011). This practice, which is called inclusive education, includes providing support education services to individuals with special needs, who are affected by disability for any reason, and ensuring that they receive education with their normal peers (De Boer, Pijl, & Minnaert, 2010).

This research was carried out with preschool teachers. In this context, it was determined that preschool teachers developed 53 different metaphors in regard with the concept of inclusive education. Of the 113 preschool teachers participated in the study, the answers given by 101 teachers to the research question were included in the evaluation. In line with the data obtained in this research, considering the distribution of metaphors developed by preschool teachers regarding the concept of "inclusive education" by categories, the following categories take the first three places: inclusive education as the riches of nature (20.79%), inclusive education depending on the soil (17.82%) and lastly, inclusive education as a work and living area (13.86%), respectively.

The category of inclusive education as the riches of nature is represented by the metaphors of "the rainbow, sun, polar star, day-night". However, the "rainbow" metaphor draws attention as the most developed metaphor by the participants in all categories. In line with the results of this study, it is possible to say that a significant proportion of preschool teachers see the individual differences of children as richness, just like the colours of the rainbow, and they think that inclusive education can guide and enlighten their paths for children who need this education.

The category of inclusive education depending on the soil is represented by the metaphors of "gardener, seed, tree, branch of tree, soil, flower, garden". Based on these results, it is possible to say that preschool teachers consider inclusive education in this category as an educational model that requires attention and patience and needs someone else's help.

The category of inclusive education as a work and living area is represented by the metaphors of "raising a baby, living in a foreign land, iron forging, life, private school, mining, games". Based on these results, it is seen that preschool

teachers state that inclusive education in this category is a process that requires attention, continuity and patience.

It is observed that inclusive education as the riches of nature, inclusive education depending on soil and inclusive education as a work and living area include most of the metaphors, which are followed by inclusive education as the rhythm of art (11.88%), inclusive education as a tool and equipment (11.88%), indispensable inclusive education (7.92%), inclusive education as other expressions (6.93%), inclusive education as food and drink (4.95%) and inclusive education as an expression of negativity, respectively.

The category of inclusive education as the rhythm of art is represented by the metaphors of "art, choir, music, orchestra". It is possible to say that preschool teachers draw attention to inclusive education in this category, which has some aspects that add voice and breath to the lives of children, who need this education, and facilitate their adaptation to real life, under this category.

The category of inclusive education as a tool and equipment is represented by the metaphors of "compass, life ring, walker, pen, book, puzzle, ladder, scale, prosthetic foot, play dough, embroidery". In line with these results, it is possible to say that preschool teachers define inclusive education in this category as a difficult and long journey that comes to life in the hands of teachers, and that they emphasize that this education model should be implemented regularly and balanced by the teachers despite its complexity.

The category of indispensable inclusive education is represented by the metaphors of “water, finger, mother, breath, body organs, oxygen”. Preschool teachers stated that they think that inclusive education in this category is a basic need for children, who need this education, and receiving educational services with their peers is an indispensable requirement for them.

The category of inclusive education as other expressions is represented by the metaphors of “coincidences, light in the dark, taking a step, dream, justice, rebirth, long way”. Based on these results, preschool teachers stated that inclusive education in this category is a difficult process that develops a sense of equality and justice among people, but even partially its quality depends on chance and coincidence.

The category of inclusive education as food and drink is represented by metaphors of "stale bread, winter salad, dessert, egg, salt". Based on these results, it is possible to say that preschool teachers consider inclusive education as a value that adds taste and meaning to the lives of children who need this education.

The category of inclusive education as an expression of negativity is represented by the metaphors of “unnecessary work, freak”. Based on these results, it is possible to say that some of the preschool teachers have negative judgments about inclusive education. This may be due to the negative situations that some of the teachers have encountered before or they do not have sufficient knowledge and equipment about inclusive education. When the relevant

literature was examined, it was determined that there are studies with similar results supporting the results of this research (Yazıcı-Nur & Akman, 2017; Gezer-Seçkin, 2017; Koçyiğit, 2015; Sucuoğlu et al., 2014; Bozkurt, 2013). In addition, Fayez, Dababneh and Jumiaan (2011), and Zelina (2020) emphasized the need for structures that contain more practices to strengthen inclusive teaching skills of preschool teachers focusing on early childhood in order to realize inclusive education applications.

Conclusion and suggestions

Based on the results of this research, the following suggestions can be made on the subject. Based on the conclusion that some of the preschool teachers have a negative perception about inclusive education, teachers can be given seminars to increase their awareness and education levels regarding inclusive education through in-service training courses. Based on the result of the fact that inclusive education is a fundamental need for children with special needs in need of this education, the number of scientific studies can be increased in order to improve the quality of inclusive education and change the progress of this education, which partially depends on chance and coincidence. Providing undergraduate-level courses to teachers, who will shape their learning lives related to inclusive education, during pre-service training periods can be an important step towards the future of the issue.

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Acta Educationis Generalis
Volume 11, 2021, Issue 2

ARTICLES

Difficult Situations in Educational Management

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DOI: 10.2478/atd-2021-0017

Received: June 19, 2021; received in revised form: June 25, 2021;
accepted: June 28, 2021

Abstract:
Introduction: The scholarly paper focuses on addressing selected issues related to the forms of managers' behaviour in coping with difficult situations in managerial work.
Purpose: The aim is to enrich human knowledge in the field of coping with difficult situations in managerial work both at the methodological level and at the level of theory development in this area.
Methods: The most commonly used method was quantitative-qualitative content analysis of the text of various types of communicants in order to systematise, analyse and describe various phenomena and situations in educational management. We describe the objects and subjects they have a quantitatively and qualitatively differentiated essence and characteristics (manager's personality, demanding working environment, specific environment of class or school, processes at work, at school or during teaching, management style, workplace culture, etc.).
Conclusion: In terms of the specific application of the mentioned knowledge in managerial work, we can assume a positive impact on increasing the effectiveness of managerial work, in the context of which this can be used to increase the quality of selection of suitable people for managerial positions, education and training of managers, as well as prediction of possible risk factors in coping with difficult situations in managerial work.

Key words: managerially difficult situations, manager - educator, stress, risk factors, resilience.

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Introduction

Difficult situations are part of the real existence of any person, and they affect all areas of life: family, school, sports, health, the environment and, naturally, work and working life (Barnová & Gabrhelová, 2017). It is the field of work where the importance of the management of coping with difficult situations comes to the fore, as this coping is often associated with the effectiveness of managerial activities (Barnová & Krásna, 2018) and the success of the educational organisation as a whole, thus affecting also other people. However, what are difficult situations, what determines that they are perceived as difficult, how they differ from "normal, not difficult" situations, where everywhere can we encounter such situations, what specifics do they have in the management of an educational organisation, how can they be handled, what all influences the coping with such situations, are the questions treated in a professional study.

The field of school management is one of the typical environments where the occurrence of difficult situations is not uncommon. Difficult situations can be perceived by school or educational institution managers as either problematic, crisis, conflict, complex, unpleasant, critical, stressful, or as an opportunity to demonstrate and apply own skills, as a challenge and starting point for career growth (Frankovský, Ištvániková, & Štefko, 2009; Frankovský & Lajčin, 2012). Some managers may avoid difficult situations, some may take them as a normal part of their work, or some may even deliberately seek them out. The difficulty of situations in managerial work needs therefore be interpreted in the context of the situational characteristics of performing this work and the dispositional traits of a particular manager. Choosing how to behave in these situations can have various consequences. Depending on how the individual handles these situations may mean self-empowering or self-threatening human behaviour (Fedáková, 2002).

Difficult situations in managerial work are represented not only by significant general and social phenomena, such as state interventions in the economy (Reinert, 1999), alliance building requirements (Kaulio & Uppvall, 2009), but also by decisive milestones in the life of a manager (job loss, revocation from or appointment to a new position) or by the organisation's existence (bankruptcy, unexpected prospering), and ultimately are related to the problems and difficulties that managers face much more frequently, sometimes even on a daily basis (disagreements with co-workers, tense relations with superiors or subordinates, dismissal of employees, resolution of conflicts between subordinates, division of work tasks, remuneration of employees, etc.).

Research (Frankovský & Ištvániková, 2008) dealing with the issue of coping with difficult situations in managerial work focused mainly on finding answers in at least three basic research contexts:

- Identifying, characterising and classifying situations perceived by managers as problematic, difficult, conflicting, complex, stressful, unpleasant, etc.

- Analysis of managers' behaviour in addressing and coping with these situations, in order that using inductive taxonomy there could be created a general classification of managers' behaviour in addressing difficult situations.
- The third context includes analyses of the relations between the way of coping with difficult situations in managerial work and the dispositional features of the manager, or the situational conditions of the occurrence of a specific problem. In this focus, attention is mostly given to the dispositional traits of managers and the conditions of operation of the organisation.

The area of management is one of the typical environments in which the occurrence of difficult situations is not uncommon. The interest in researching the ways of managers' behaviour coping with difficult situations in their work is conditioned by the efforts to explain the general factors which, according to Výrost et al. (1995), relate to:

- Understanding life plans, personal perspective, career development.
- Information about the current state of motivational and emotional components of an individual's personality.
- Characterisation of ways and procedures of addressing and coping with problems.

In terms of practical use of knowledge acquired about coping with difficult situations in managerial work, according to Lajčin and Frankovský (2011) it is possible to assign to these general factors underlying the interest in these issues also specific applications in managerial practice related to:

- Recruitment for managerial positions, where these people inevitably encounter difficult situations.
- Training of managers holding these positions to effectively cope with difficult situations in the organisation's management (Pitt & Sims, 1998; Talbot, 1997).
- Processing of procedures for addressing these situations within the organisation and their training at individual levels of management, e.g. for high-risk situations (Slaven & Flin, 1994).

1 Managerially difficult situations

The growing interest among the professional and lay public in the issue of coping with difficult situations can be dated back to the early 1980s (Folkman & Lazarus, 1980; Folkman et al., 1986; Lazarus, 1981; Lazarus & Folkman, 1987; Carver et al., 1989; Amirkhan, 1990; Nurmi, Toivonen, Salmela-Aro, & Eronen, 1996; Folkman & Moskowitz, 2004), and today this field of knowledge still enjoys attention (Mcnaughton-Cassill, 2015; McCarthy, Erdogan, & Bauer, 2019; Modranský, Bočková, & Hanák, 2020; Barlette, Jaouen, & Baillette, 2021). The presented interest is a reflection of the general rapid dynamics in people's lives (need for mechanisms of democratic resolution of social issues, increasing number of difficult situations in life, e.g. Covid-19, where a manager

must analyse, compare and evaluate assumptions, strengths and weaknesses, opportunities and risks of online education at schools in terms of managerial competencies of schools' management or educational management, ensuring the quality of online education, educational needs of students and further education of teachers of different types of schools as a prerequisite for creating innovations in the virtual environment of the new educational reality, including the rising interest in questions as to how effectively address these situations, what is their impact on the mental health, health and well-being of a person, addressing the issues of quality of life, etc.), as well as of specific requirements of social practice (new approach and development of managerial activities, effective functioning of an organisation, the need to adopt unpopular measures, time stress in decision making, conflicts in the workplace, team building, etc.).

If a person gets into a difficult situation, the focus of that person's attention is on solving the situation, considering possible procedures, obtaining the necessary information, seeking help, finding escape options, etc. Perhaps this is the reason why answering the question and explaining what a difficult situation is, how to identify it, which situations people evaluate as stressful, problematic, conflicting, complex, unpleasant, recedes into the background, is not prioritised, while, paradoxically, the definition of difficult situation receives less attention than the questions concentrating on how one handles such situations, what forms of behaviour one chooses, how one resolves them.

In terms of the needs of an organisation, e.g. school, but also a specific manager, this is logical. For the representatives of all these positions, the decisive fact remains as to how the manager addresses the given situation, how he/she behaves in it, how he/she handles it, what is the efficiency of his/her conduct. This fact consequently guides the attention of most researchers in the direction towards behaviour analysis and its predictors related to the manager's traits or the characteristics of the difficult situation. All this happens while the question of what a difficult situation is, or what kind of situation a person perceives as difficult is crucial, both in terms of its identification and in terms of its solution (Frankovský, 2001; Madsen, & Petermans, 2020). The answer to this question is also crucial in terms of the managers' training to deal with different types of difficult situations, as well as in terms of developing specific procedures within an organisation to address certain difficult situations.

The perception of the degree of difficulty of the situation is different on the individual level. It is obvious that, for instance, changes in the national or school curriculum or the transition to online education is simply ordinary work for some managers - something that they do not perceive as stress, a burden, or an unpleasant situation. On the other hand, other managers may perceive the same situation as difficult, stressful, unpleasant. Coping with this situation requires from them maximum commitment, self-control and personal coping with this situation. Nonetheless, the situation's difficulty as such can be viewed as a threat, fear of failure, on the one hand, but can also be perceived as a challenge,

an incentive to embark on something new, to prove one's own qualities, to assert oneself, on the other hand. It is clear from these examples that the very effect of the level of difficulty and its subjective assessment must be interpreted both in the context of situational characteristics in which situation coping takes place, and in the context of dispositional traits of a particular manager who is an actor in such coping (Krásna, Geršicová, & Tamášová, 2016; Yip Goldman, & Martin, 2021).

2 Classification of difficult situations

The classification of difficult situations and its subsequent typology, with rare exceptions, presuppose the multidimensional nature of the systematic classification of situations by defined criteria. As a result, it is possible to classify a specific difficult situation into a certain generalised category (Holmes & Rahe, as cited by Reese & Smyer, 1983; Pujol-Cols & Lazzaro-Salazar, 2020). It should be noted that this highly generalised definition of difficult situations does not take into account either the individual specifics of managers, nor the specifics of individual organisations, nor the specifics of individual management activities and, ultimately, neither does it take into consideration the specifics of a particular difficult situation. This approach does not allow to effectively define predictors of behaviour in a difficult situation. From a practical point of view, the one-dimensional approach is not optimal at the level of diagnosing difficult situations, or the management of their coping, and therefore little attention is paid to this aspect, both in research and practice. From a theoretical and methodological point of view, regarding the concept of one-dimensional understanding of the difficulty of situation it would be possible to consider a two-dimensional approach, in which difficulty and non-difficulty would be defined as separate dimensions. In this context, it is possible to think about the types of situations that are evaluated in the dimension of their difficulty (from the least difficult to the most difficult) and about the types of situations that are evaluated in the dimension of their non-difficulty (from the least non-complex to the most non-complex). Using this approach should make distinction between the levels of minimum and maximum non-difficulty and minimum and maximum difficulty. The mentioned specification would make it possible, for example, to analyse the ties between these two independent dimensions and the dispositional traits and situational characteristics entering into coping with a difficult situation.

In contrast to one-dimensional thinking about the classification of difficult situations, Reese and Smyer (1983) propose, in the focusing on multidimensional categorisation of situations, two essential dimensions of taxonomy and classification of difficult situations as life events:

- Type of life event;
- Context of life event.

Based on the first dimension - type of life event, the authors propose to distinguish the following four levels of this dimension, which allow to specify the following types of life events: 1. type biological, 2. individual - psychological, 3. cultural - sociological, 4. physical.
The second dimension makes it possible to distinguish the following fourteen contexts of life events, which specify the contents of the specified types of life events, as defined within the first dimension: Family, Love and marriage, Parenting, Housing, Health, I, Public, Friends, Social relations, Money, School, Work, Law, Other ....
In relation to the above classification, we can cite an example of a difficult situation - promotion to a higher managerial position or job loss. It can be classified as an event of individual-psychological type and as the context of work. In a similar system - context framework, we would probably characterise most of the difficult situations associated with the management of an organisation. Problems with a superior would thus be represented by an event of an individual-psychological type and the context of work.
When evaluating the proposed classification of life events, it is not always possible to clearly assign a specific situation to a specific type and context of events.
Baumgartner and Hadušovská (1997) write that the study of situations and the attention paid to this area has had a long tradition and research has been carried out mainly in the field of psychology and sociology. In this focus, we encounter a number of older research concepts. According to Krahé (1990) and Pujol-Cols and Lazzaro-Salazar (2020), approaches to the study of subjective construction of the meaning of situations can be classified into three concepts:

- Social episodes - research oriented at revealing the dimensions of cognitive representations of situations that specify the process of recognising these situations.
- Situational prototypes - research oriented at the categorisation of social stimuli in relation to situational characteristics.
- Cognitive scenarios - research oriented at the relationship between information about situations and their cognitive processing.

Výrost (1997) proposed a classification of difficult situations associated with the attempt to conceptually clarify the essential categories related to the issue of coping on the basis of an analysis of several researches in this area of knowledge. The specification of situation types is based on the distinction of conditions (antecedents) and responses (consequences) to these conditions. In terms of situations that are perceived as difficult, the author described three larger groupings that can be characterised as stressful situations, life events and difficult life situations. Likewise, three groupings were characterised in terms of consequences, i.e. responses to these situations. In this case, we consider coping, life skills and behaviour strategies. Based on these groupings on the antecedents

and consequences side, the links between the types of situations and the responses to these situations were defined (Figure 1).

STRESSFUL SITUATIONS	⇒⇒⇒⇒	COPING
LIFE EVENTS	⇒⇒⇒⇒	LIFE SKILLS
DIFFICULT LIVING SITUATIONS	⇒⇒⇒⇒	BEHAVIOUR STRATEGIES

Figure 1. Mutual relations between selected antecedents and consequences (Výrost, 1997).

From the above scheme it is possible to specify that research in stress situation aligns with analyses - coping, life events align with the research of life skills, and difficult life situations align with the research of behaviour strategies.
In contrast to the presented scheme of cause-and-effect relationships, instead of the designation 'difficult life situations', in this study we use managerially difficult situations due to a more significant distinction of difficult situations and life events, or of stressful situations in terms of common, everyday occurrence. At the same time, where consequences are concerned, we use the term coping mainly due to a broader scope of possible reactions to the emerging difficult situations.
Of these three types of difficult situations, research at the level of stressful situations, as extraordinary events of a general threat to a person, often associated with a threat to life, has enjoyed the longest tradition.
The concept 'stress' keeps appearing and has received increased attention since the 1940s in connection with the period of World War II and the addressing of the issue of war neuroses. World War II was a great tragedy and a disaster for humanity. However, it was also a period when attention began to be paid to the impact of surviving tragedies, life-threatening situations on the human mental state. According to Bratská (2001), the first monograph devoted to the issue of stress by Gringer and Spiegel - Men under Stress - was published in this period, specifically in 1945.
Selye (1956, 1966), as perhaps the best-known author in relation to the study of stress, focused on the research into the influence of stressors on the course of physiological processes and their impact on human mental health. In this case, the cause (antecedent) was a stressful situation, which causes a complex of reactions called GAS (General Adaptation Syndrome). In the original concept, stressful situations were characterised as extreme, critical, frequently, as has already been mentioned, on the verge of life-threatening. However, the stress antecedents have been expanded in the current understanding of stress to a much broader complex of situations that affect the body. In this focus, which, in addition to the physiological context, also drew attention to the psychological context, it is necessary to mention the contribution of Lazarus and Folkman

(1984), who emphasised the subjectivity of assessing the degree of threat caused by a given situation.

In relation to the specification of the concept 'stress', Daniel (1997) proposes a distinction between the concept 'burden' and 'stress'. In this context, 'burden' is associated with common situations, or less difficult, and 'stress' with highly difficult, critical situations. The degree of difficulty though must be interpreted not only from the aspect of its amount in the short term, but also from the aspect of its long-term effect. Already Lazarus (1993) pointed out that in everyday life many conditions (marriage, love, illness, job, school exam, investment decision, type of production, choice of suppliers, insolvency, conflicts in the workplace) can produce effects comparable to those examined in combat conditions, especially if they act for a long time and repeatedly. Birkner (2010), Herrero, Egbu and Fong (2018) also point out the fact that the stress level is related not only to extremely difficult life situations, but also to situations that are basically not so demanding, but are mildly burdensome and last a long period of time, i.e. situations that are not stressful in intensity but in duration.

At present, a much broader discussion, in terms of topics, on the dispositional, situational and interactive processes of learning of psychological phenomena, on the influence of cognitive, motivational and emotional factors on these processes is reflected in the individual approaches to the definition of stress and the proposals for its research (Frankovský, 2003).

In relation to the above ideas, it is possible to divide the encounter with a managerially difficult situation in the managerial work and the reaction to such encounter into the following stages:

- Primary evaluation of the situation. Does this situation threaten me, what is its level of difficulty?
- Secondary evaluation of the situation. I will cope to solve this, what should I do, what procedure to choose (Baštecká & Goldman, 2001).

An important characteristic of the primary and secondary evaluation of the situation, as mentioned by Baštecká and Goldman (2001), is the aspect of the subjectivity of this process. When assessing the degree of threat, difficulty, but also when assessing the likelihood of coping with the situation, as well as the choice of procedure, a subjective comparison with own schemes of threat, difficulty, and solution procedures comes to the fore.

The importance of subjective assessment of a difficult situation is also emphasised in the characterisation of stressful situations by Atkinson et al. (1995). The author states that stressful events are most often individually evaluated as uncontrollable, unpredictable, at the limit of human abilities. The degree of difficulty of the situation is therefore the result of subjective perception and evaluation of several criteria of the situation faced by the person. These criteria can be specified as follows:

- inability to influence the situation;
- inability to predict the emergence of a stressful situation;

- excessive and disproportionate claims;
- life change that requires significant adaptation;
- subjectively unsolvable internal conflicts.

2.1 Taxonomy, context and categorisation of situations

The taxonomy of situations based on the degree of difficulty, which, unlike previous taxonomies, is derived from the results of the effect of these situations on people, was developed by Mikšík (1991). The degree of burden that results from the difficulty of the situation in this concept ranges across the full scale of continuum - from the optimal burden stimulating mental development through to the extreme burden causing mental breakdown and leading to disintegration of personality. Difficult situations are then classified in this taxonomy as:

- Performance-intensive situations - in an extreme form they lead to the exhaustion of physical or mental strength, it is impossible to cope with them indefinitely.
- Problematic situations - they require a new solution, heuristic procedures, a new way of working, they can lead to an inability to solve the problem, to a loss of self-confidence.
- Situations of frustration - an insurmountable obstacle appears between the individual and the goal of his activity, they can cause syndromes of frustration or deprivation.
- Conflict situations - they lead to disintegration of decision-making processes, they are caused by the presence of several equivalent solution alternatives, or interpersonal conflicts.
- Stressogenic situations - they lead to the disintegration of mental structures; they are associated with situations threatening the existence of an individual.

A multidimensional classification of difficult situations was described by Výrost et al. (1995), Bolfíková (1997), Baumgartner and Hadušovká (1997). The above classification of difficult situations was performed on the basis of an inductive approach, which took place in several consecutive stages.

The mentioned procedure (Bolfíková, 1997) produced, with the aid of an open-ended question, a description of 5 life situations, which the respondents experienced as the most demanding in their lives. At the same time, respondents ranked these situations according to their level of difficulty. The performed content analysis of descriptions of difficult situations made it possible to define 5 criteria of the specification and classification of these situations: a) Socio-cultural level; b) Level of problem; c) Level of time; d) Level of social closeness; e) Level of fact and survival.

The criteria that proved to be the most effective for the final form of the taxonomy of difficult situations: socio-cultural level and level of social closeness.

The processing of the obtained empirical material in terms of the first criterion (socio-cultural level) made it possible to specify eight contexts of situations,

which were represented by the following areas: Health; Partnerships; Family; Self-reflection; Study and school; Job and workplace; Money, material values; Morality, existential issues, social norms.
The analysis in the social closeness level made it possible to categorise the situations into four types, the common denominator of which was social closeness: I; Closest person to me; My acquaintances; Society, state, world.
The results of this research provided a basic insight into the possible categorisation of situations and thus prepared material for further analysis. At the same time, though, they provided information on the frequency of emergence of individual types of difficult situations.
The above procedure of classification of difficult situations was continued in the works by Výrost et al. (1995), Baumgartner and Hadušovská (1997), who, on the basis of subjective perception of affinity and evaluation of difficulty of specific situation defined, by combination of 8 contexts of situations and 4 possible subjects - actors of situations, 64 model difficult situations (each combination was represented by two situations). By applying mathematical-statistical procedures (factor analysis, multidimensional scaling and Q-sort) they were classified using two decisive factors - the actor in the difficult situation (the subject of the situation - the one to whom it happened) and the context of this situation (what happened, what is the content of the situation), the following challenging situations:

- In the area of the closest interpersonal relationships of the individual (partner, friend and family relationships).
- In the area of broader interpersonal relationships of the individual (work, education and material security).
- Associated with immediate danger to life (illness, injury, death).
- In the area of existential and moral problems (meaning of life).

The difficult situations that can occur in the organisation's management are characterised by Copper and Marshall (1978) on the basis of six areas of stress in the work context as:

- Internal work environment - in this area it is mainly the conditions and manifestations directly related to the performance of work activities such as mental or physical overload, work environment, work rhythm, level of risk factors, flexibility, etc.
- Organisation's environment - these are the factors of work organisation, such as precise definition of work activity, degree of responsibility, etc.
- Social environment - attention is focused mainly on social relations with co-workers, superiors and subordinates. These relationships are considered to be an important mediator of the effect of stress factors, which can correct the mentioned effect in both a positive or negative direction.
- Career prospect - here can be included questions related to professional and career growth and advancement (reassignment to a higher, lower position, clear conditions for career growth, opportunities for advancement, etc.).

- Organisational culture - these are factors related to the overall culture of life of the organisation, the level of communication, the form of employee management, problem solving, employee care.
- Work and family life - here can be included activities related to the harmonisation of the requirements that employment and the family place on a person. In particular, addressing conflict situations in which it is necessary to meet the work requirements at the expense of the family.

According to Oravcová (2004), and Ronginska and Doliński (2020) difficult situations in managerial work can be specified not only on the basis of stressful conditions, but also in contexts that are not uncommon in everyday life and are based on:

- Time pressure - mostly associated with the performance of precisely timed tasks.
- Excessive quantity of tasks.
- Excessive variety of tasks.
- Chaotic organisation of work.
- Stereotypical and boring nature of work.

The relatively separate and specific area of managerially difficult situations in the management of an organisation is defined by the issue of organisational change and the related management of coping with this change and its consequences. In this context, Judge, Thoresen and Pucik (1999) examined managerial coping with organisational change in terms of the seven dispositional traits of managers (locus of control, generalised self-efficacy, self-esteem, positive affectivity, openness to experience, tolerance for ambiguity, and risk aversion). Based on these characteristics, they extracted two factors: positive self-concept and risk tolerance, which are significantly related to the management of coping with organisational change. At the same time, these authors pointed out the importance of the context in which the organisational change takes place (job position, salary conditions, job satisfaction, management of the organisation, career growth, etc.). The analyses of these authors confirmed the position of mediators of the contextual conditions through which the extracted factors act on the coping process.

Beech and Caims (2001) and Herrero, Egbu, and Fong (2018) also highlighted the importance of coping processes as active procedures aimed at success in implementing organisational change. At the same time, they also highlighted cases in which coping was understood more as a passive, defensive reaction to change.

Another possible approach to the specification and typology of difficult situations in the organisation's management is to differentiate them into individual and collectively difficult situations (Muhonen & Torkelson, 2008).

Another view of the occurrence of difficult situations in the work of a manager, in terms of rather qualitative characteristics, is presented by Urban (2008). The author works from the assumption that an essential part of managerial work is

not so much the creation of long-term visions and strategies, but rather the solution of minor human problems, issues of motivation, improving employees' skills. Based on the above, the author suggested 10 areas of difficult situations that managers must cope with. In this way he distinguishes the following areas of difficult situations:

- Self-management.
- Transition from a performance function to a managerial function.
- Managing motivation and persuasion.
- Control management and delivery of adverse messages.
- Management of difficult-to-cope-with co-workers (subordinates and superiors).
- Overcoming conflicts and stress.
- Change management.
- Transition from management to leadership and coaching.
- Creating and managing an effective team.
- Management in an international environment.

Naturally, it is also possible to discuss other areas of occurrence of difficult situations in managerial work. However, as the author notes, the number of situations defined in this way is not decisive. The aim of the specification of the presented structure of difficult situations was to cover the essential areas of self-management, through people management to the international, cultural context of management.

A specific view of the definition of managerially difficult situations in management is represented by the currently very frequent approach to the study of work-family conflict as a clash of two responsibilities in relation to the family and in relation to employment. Multiple studies (Aluko, 2009; Lorincová & Birknerová, 2019) describe this type of difficult situation as highly stressful.

Work-life balance is one of the main topics on the European Union's social policy agenda (Sklenár, Frankovský et al., 2007; Ika, Couillard, & Garon 2021). In the real life of organisations, this topic is reflected in the implementation of a family-friendly strategy to cope with this difficult situation in the management of organisations.

Conclusion

The mentioned procedures for finding the structure of managerially difficult situations, generally also directly in management, represent typical approaches to this issue that can be found in the literature. They are characterised by a multidimensional approach to defining the structure of these situations and an empirical-inductive process of identifying individual elements of the structure of difficult situations. The theoretical-deductive procedure of defining the structure of difficult situations can be found more rarely. From the opinions of individual

authors presented above, we could assign to this approach the classification of the 10 areas of situations proposed by Urban (2008).

The presented taxonomies of difficult situations in general, as well as in managerial work, testify to the fact that there are many such approaches, proposals, and concepts. In addition to the above-listed characteristics, in the varied mosaic of these approaches we can generalise taxonomies oriented more procedurally (Urban, 2008) or contextually (Střelka, 2008; Rost, Sonnenmoser, & Renzel, 2019). We want to draw attention to and emphasise the importance of the factor of subjective evaluation of a difficult situation, which is related to both the dispositional attributes of the manager and the conditions of a specific situation.

Encounters with difficult situations, the way they are addressed and the residuals of these processes can significantly affect the quality of manager's life, existence, mental and physical health. As a result, at present more and more attention is focused on the issues of perception, experience and effective solution of difficult situations in the management of an educational institution (or company), though neither do the conditions causing these situations and underlying their solution escape attention.

The search for effective ways of coping with difficult situations in managerial work is a process that must therefore be based on an interdisciplinary view of the issue.

Acknowledgement

The contribution was created within the solution of the scientific project IGA 007DTI University/2020: Managerial competences and innovations in current educational practice. at DTI University in Dubnica nad Váhom, Slovakia.

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Acta Educationis Generalis
Volume 11, 2021, Issue 2

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Volume 11, 2021, Issue 2

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Acta Educationis Generalis
Volume 11, 2021, Issue 2

Periodicity: Three issues per year
Publisher: Vysoká škola DTI, Ul. Sládkovičova 533/20, 018 41 Dubnica nad Váhom, Slovakia
Place of Publication: Dubnica nad Váhom, Slovakia
IČO: 36342645
Date of Issue: August 20, 2021
Journal Website:
https://content.sciendo.com/view/journals/atd/atd-overview.xml
http://new.dti.sk/p/19-vedecke-casopisy
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ISSN 2585-74X (print)
ISSN 2585-7444 (online)
EV 4309/11