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The Relation Between Leadership and Expected Results From the Educational Process Within School Culture

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Abstract/Izvleček School culture is a multifaceted concept, comprising multiple dimensions. The present research explored relations between selected dimensions: between the dimension focused on shared objectives, trust in school leadership, and on a managerial approach, and the important dimension focused on the innovation process and the results expected from the education process. School leaders using the School Culture Inventory evaluated current and desired school culture in their primary schools to identify culture gaps. The research findings should help school leaders in planning to shape the culture and innovate the strategy of the schools they manage.

Povezave med vodenjem šol in pričakovanimi rezultati izobraževalnega procesa v okviru šolske kulture

Šolska kultura je večplasten pojem, ki vključuje različne vidike. V pričujoči raziskavi preučujemo povezave med izbranimi vidiki, in sicer med vidikom, ki se osredinja na skupne cilje, zaupanje v vodstvo šole, pristope vodenja, ter vidikom, ki izpostavlja proces inovacij in pričakovane rezultate izobraževalnega procesa. V raziskavi so vodstva šol s pomočjo »Popisa elementov šolske kulture« ocenila sedanjo in želeno šolsko kulturo na svojih osnovnih šolah z namenom ugotavljanja vrzeli. Izsledki raziskave naj bi bili vodjem šol v podporo pri oblikovanju šolske kulture in pri inoviranju strategije šol, ki jih vodijo.

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Introduction

An important topic in the area of school management is the search for evidence on whether the key elements of a strong, positive school culture are linked to sustainable school improvement and the subsequent application of positive experiences in practice (Lee and Louis, 2019). Currently, researchers from a number of countries are paying significant attention to leadership in education settings (e.g. Bush, 2016; Heikka, Waniganayake, and Hujala, 2021; Wu and Shen, 2022; Yavuz and Gulmez, 2018)

As stated by Sun and Leithwood (2012), improving student achievement has become the focus of policymakers in many jurisdictions. Effective school leaders have a strong, positive influence, directly or indirectly, in improving schools and their outputs (Pont, Nusche and Hopkins, 2008; Leithwood, Day, Sammons, Harris, and Hopkins, 2006b; Yildirim, 2018). Increased focus on school autonomy, education and its outputs has also raised the importance of the role of school leaders in managing schools and in turn, necessitates a reassessment of their role in shaping school culture at the time of implementation of a new school development plan.

Previous studies underline that school culture is an integral part of school improvement (cf. Gruenert and Whitaker, 2015; Lee and Louis, 2019). Nevertheless, a school's culture can work not only for but also against improvement and reform. There is frequently reported evidence that leadership makes a difference in schools (e.g., Hallinger and Heck, 1996; Lindahl, 2010; Louis, Dretzke, and Wahlstrom, 2010, Osiname, 2018). Experts in the area of education have made contributions to the question of how the behaviour of school leaders contributes to pupil achievement. Unfortunately, most research studies have examined a limited range of leadership behaviour, thus making comparisons across studies difficult (cf. Ariyani, Suyatno, and Zuhaer, 2021; Lee and Louis, 2019). There is a need for further research (e. g., Ariyani et al., 2021; Louis et al., 2010; Sun and Leithwood, 2012) to investigate the nature of school leadership, its impact on achievement results of the educational process, and how such impacts differ across contexts (e. g., school level and type).

The objective of this research is to explore the interrelationship between selected dimensions of school culture and their influence on expected performance. The study will address the following question.

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What is the relationship between leadership and management in primary schools and the innovation process and expected results of education? This question tests the significance of leadership at primary schools in the school culture concept for one of the critical objectives for schools today: increasing the innovation process and expected pupil learning outcomes.

Theoretical background

School leadership and expected outcomes of the educational process within school culture
In general, the school leader's mission is to lead the school in the right direction and to motivate the key actors in the school and other stakeholders to do the same. As a leader, the school head applies the aspects and strategies of leadership to manage the school's resources to achieve the school's goals (cf. Ariyani et al., 2021). He or she strives to accomplish these together with other people and in cooperation with them.

A highly discussed topic is the extent to which school leaders affect the educational process and school performance (Witziers, Bosker and Krüger, 2003). This study focuses, therefore, on a topic of importance not only for the Czech Republic (CR), but also in a wider context (c.f. Ariyani et al., 2021; Bush, 2013; Leithwood and Jantzi, 2006; Pont et al., 2008).

Although there are divergent views among organisational theorists about the nature of culture (Fidler, 2002), many authors have agreed that organizational culture has a deep impact on a variety of organizational processes, including teachers and school performance (e. g.; Cameron and Quinn, 2011; Deal and Peterson, 1999). Therefore, school leaders are advised to develop strong cultures in their organiza–tions to achieve greater commitment and improve the overall performance of the organization (Ginevičius and Vaitkūnaitė, 2006; Shahzad, Luqman, Khan and Shabbir, 2012).

Kulhavy (1990) stated that school culture includes everything in a school's surroundings that is made by human beings, and includes tangible items as well as intangible concepts and values. Schein (2016) stated that understanding the culture results in understanding the organization.

Leithwood and Riehl (2003) argued that leadership is the most significant of all factors and represents nearly one-quarter of the total effect of all school factors.

Oplatka and Hemsley-Brown (2007, p. 303) declared that 'principals have a major role in the changing of the school culture.' This research focuses on specific leadership practices in relation to strengthening school culture and underlines the role of developing a shared vision and building consensus in school strategy (cf. Sun and Leithwood, 2012).

Changes in the management of particular schools often result in challenges for school culture (Burkhauser, Gates, Hamilton and Ikemoto, 2012). Dolton and Newson (2003) found that negative changes in school culture also influenced student achievement, a result which confirms the association between leadership and expected teaching and learning outcomes within school culture (cf. Nielsen and Taggart, 2021). The analysis by Lee and Louis (2019) suggests a clear link between schools with a strong culture and their continuous improvement in school-level achievement. Among other features of a strong culture are listed staff commitment to pupil support and learning, teacher collaboration and collegiality, academic press and improving pupil achievements (Tamir and Ganon-Shilon, 2021).

To achieve new insight regarding the role of leadership within the school culture, this study will address these two research questions:

Q1: What are the main culture gaps in primary schools?

Q2: Will the leadership and management dimension of the School Culture Inventory have a positive relationship with the innovation processes dimension and with the expected results of the educational process?

The size and type of school and school culture

Another topic discussed in the literature is whether the size of the school affects its organisational culture (Lee and Louis, 2019; Pavlidou and Efstathiades, 2021). Smaller schools may offer greater possibilities to develop personal social relations that support staff cooperation, a friendly climate and communication with parents. On the other hand, large schools usually offer better and more specialised equipment, teaching staff with varied specializations and, of course, the school management comprises more than one person. Leithwood and Jantzi (2005) in their review argue that school size may significantly affect leadership. Moreover, Yildirim (2018) found both positive and negative opinions among principals according size and type of school. Within this context, this study also centres on a specific research question:

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Q3: Do the size and type of school influence the differences in the evaluation of the selected dimensions of school culture?

Research method

As mentioned above, school culture is a multifaceted concept, comprising several dimensions (e.g., Higgins-D'Alessandro and Sadh, 1998; Hinde, 2004; Zhu, Devos and Tondeur, 2014). It should also be noted that the culture of a school forms over time, and Hallinger (2018) also foregrounds the role of national cultural context. Maslowski (2005) conducted a critical review of previous school culture inventories and declared that questionnaires could be a valuable tool in diagnosing school culture. For example, the School Culture Scale by Zhu et al. (2014) was used to measure five school culture dimensions with regard to goal orientation, leadership, innovation orientation, participative decision-making, and formal relationships. Next, the model proposed by Bell and Kent (2010) applied the dynamics and importance of both external and internal organizational forces in shaping the culture of schools. Furthermore, research by Pavlidou and Efstathiades (2021) focused on internal marketing strategies, using a construct of school culture with six components and a range of variables. As with Fidler's (2002) features (dimensions) of school culture, this construct focuses on leadership, external and internal communication (including staff cooperation and relationship with children), school aims and attitude to innovation. Given the context of the Czech Republic, it does not address the dimension of multicultural orientation.

The study focuses on the dimensions of school culture within Czech schools and follows a pilot study by Eger and Prášilová (2020). The theoretical construct of this research was prepared on the basis of a literature review (among others, Bush, 2003; Everard, Morris and Wilson, 2004; Fidler, 2002; Gruenert, 2000; Maslowski, 2006; Peterson and Deal, 1998). This research explored school culture empirically, using a quantitative research design (Creswell, 2014). The School Culture Inventory is used to gather data with the aim of establishing what dimensions of school culture affect the expected results of the educational process in selected primary schools.

Sample

Data was collected by distributing a closed questionnaire to a sample of school leaders of primary schools in the Czech Republic (this type of school corresponds to the international classification ISCED 1 and 2, Stará and Starý, 2019). The respondents were school heads (170) or their deputies (92) who participated in the project 'Strategic Management for Planning at Schools and in Regions', which was supported by the National Pedagogical Institute of the Czech Republic. Participants completed the course voluntarily based on their interest in improving their school and came from all regions of the CR. Data for this study thus came from school leaders (convenience sample) who were attending the first module of this project focused on school culture. Each respondent evaluated their own school.

The sample consists of two types of primary schools. The first one includes primary schools with their own kindergarten ($n = 91$), and the second comprises primary schools without a kindergarten ($n = 171$).

In addition, the research sample included primary schools with different numbers of pupils. In the Czech Republic (EURYDICE, 2021), on average, there were 20.3 pupils in classrooms in the first stage and 21.5 in the second stage of primary schools. Large schools are usually situated in towns and in regional cities, where the number of pupils in classrooms is often above average. The schools in the sample were divided into small schools with up to 200 pupils ($n = 102$), medium-sized schools with 200 – 500 pupils ($n = 113$) and large schools with more than 500 pupils ($n = 47$), based on knowledge of the educational environment in the CR.

Instrument

The cultures of the selected schools were examined using the School Culture Inventory developed by Eger and Jakubíková (2001) based on ideas by Everard and Morris (1996); Everard et al., (2004); Fidler (2002); along with a description of Handy's four culture models by Bush (2003). The instrument has been used for self-evaluation activities in the CR since 2001 in diverse school settings (e. g., Eger and Prášilová, 2020; Hornáčková, Princová and Šimková, 2014). The School Culture Inventory contains 16 items that were developed to assess school culture in important domains by creating dimensions (variables) of school culture. The construct of the questionnaire is consistent with similar research (e. g., Gruenert, 2000, Turan and Bektas, 2013) and meets key school culture traits established by Sukkyung, Ann and Sun (2017).

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Some items partly align with research by Leithwood and Jantzi (2006), who used robust tools in their study aimed at transformational school leadership.

This tool evaluates school culture in five selected dimensions (see Table 2). The first dimension, Leadership and management, contains four items focused on shared objectives, trust in school leadership, and the managerial approach, that is, task management and control. The second dimension, the School environment, contains three items focused on organizational structure and delegation, working conditions, along with the aesthetic environment and cleanliness. The third dimension, Communication, contains three items focused on teacher motivation, information exchange, and communication with parents and stakeholders. The fourth dimension, Relationships within the school, contains three items focused on supportive leadership style, relationships and teacher collaboration, and teacher-pupil relationships. The fifth dimension, focused on the Innovation process and the Results expected from the educational process, contains three items, two of which are mentioned above. These five dimensions and their interrelationships constitute the framework for our evaluation of school culture (Eger and Prášilová, 2020).

Based on the theory given above (cf. Everard et al., 2004; Leithwood, Day, Sammons, Harris and Hopkin, 2006a), the study also evaluates the relationship between the Leadership and management variable and the variable Innovation process and Expected pupil learning outcomes. In this study, Innovation process and Expected pupil learning results create dependent variables that depend on the national strategy in education and the general postulated fact that a positive culture of organisation supports achieving the needed results of the educational process (cf. strong culture and student achievement, Lee and Louis, 2019; Tamir and Ganon-Shilon, 2021).

The School Culture Inventory uses a five-point Likert scale, and for more detailed description of each school culture item, contains short, detailed descriptions. For example, the item Shared Objectives has a detailed description for point 1 = no awareness of school objectives, no planning, and the opposite for point 5 = full knowledge of shared objectives, clear orientation, common planning. Item 16 has a detailed description for point 1 = no good results expected, no interest, and the opposite for point 5 = high expectations of excellent teaching and learning results.

The strength of the tool is that it useful for identifying culture gaps (Kilmann-Saxton, c.f. Peters and Waterman, 1982) between current (existing) cultures and desired school cultures.

The findings about culture gaps are very important when school leaders plan to shape a positive culture, including a positive climate (c.f. Leithwood et al., 2006b; Peterson and Deal, 1998).

Procedure

Two experienced academic experts coordinated the research. One was also responsible for the module focused on the school culture in the NPI project. The questionnaires were administered as part of a workshop where participants were asked to indicate their familiarity with items on the School Culture Inventory (current state and desired state for each item). This means that one respondent, who was a school head or deputy head (both are included under the term school leaders) evaluated their own school using experience from practice. The participants also assessed the desired state of school culture using the same tool.

Data analysis

First, a descriptive and correlational analysis was conducted to explore the actual level of school culture in selected primary schools. It applied the identification of the culture gap (Kilmann-Saxton) between the current (existing) culture and the desired school culture using descriptive statistics. Second, another purpose of the study was to investigate the relations between selected dimensions of the School Culture Inventory. The comparison between the dimension of Leadership and management and the dimension of the Innovation process and the Expected outcomes of the educational process was investigated using the Mann–Whitney *U* test. According to the Kolmogorov-Smirnov test, the variables were non-normally distributed, recommending nonparametric statistical tests (Jackson, 2016). Data were analysed using MS Excel and Statistica software. Third, to analyse whether school size influenced school culture and differences in selected dimensions of school culture, the Kruskal-Wallis test was used. In addition, to analyse whether school type influenced school culture and differences in selected dimensions of school culture, the Mann–Whitney U test was used.

For clarity, Figure 1 shows an investigation model comprising all presented questions and key hypotheses together.

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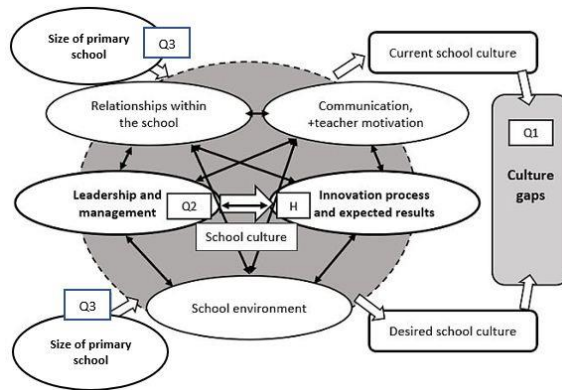
Figure 1: Investigation model

Results

Descriptive statistics for items from the School Culture Inventory are provided in Table 1. First, the means and standard deviations for each item were calculated.

Table 1: List of items, School Culture Inventory

| Items | Primary schools ($n = 262$) | | | |
| | Current culture | | Desired culture | |
	Mean	SD	Mean	SD
1 Shared objectives	3.4	0.7	4.4	1.2
2 Trust in school leadership	3.8	0.7	4.6	1.0
3 Supportive leadership style	3.4	0.8	4.6	0.8
4 Organizational structure and delegation	3.9	0.7	4.7	1.1
5 Managerial approach – task management	3.5	0.7	4.2	0.8
6 Managerial approach - control	3.6	0.8	4.7	1.2
7 Motivation of teachers	3.2	0.7	4.7	1.3
8 Communication in the school and information exchange	3.8	0.7	4.7	1.0
9 Communication with parents and stakeholders	3.8	0.8	4.7	1.2
10 Innovation of teaching and learning process	3.3	0.7	4.4	1.0
11 Teacher development	3.7	0.7	4.7	0.9
12 Working conditions at the school	3.6	0.7	4.7	1.0
13 Aesthetic environment and cleanliness	3.7	0.7	4.4	0.9
14 Collaboration among teachers in the school	3.8	0.9	4.7	1.1
15 Teacher-student relationships	3.6	0.7	4.6	1.0
16 Expectations of education results	3.1	0.6	4.0	0.8

Note. SD = standard deviation. Cronbach's alpha for the overall score on the School Culture Inventory was .88.

Identification of culture gaps (Kilmann-Saxton) between current cultures and desired school cultures are presented in Table 1 and Figure 2. The findings showed where the problems lie in school cultures and where opportunities exist for school leaders when they are thinking about school development and shaping school culture. Standard deviation shows how spread out the respondent evaluations are from the mean. The highest SD occurs in the item Motivation of teachers and the lowest in the items Supportive leadership style, Managerial approach and Expectation of educational results.
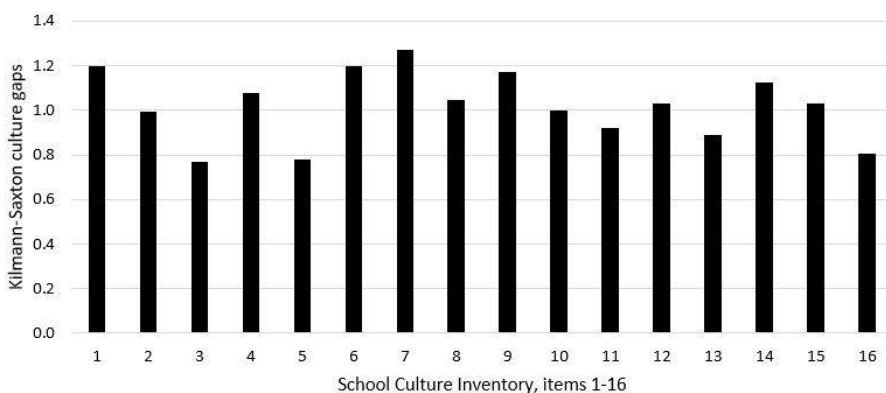
Figure 2: Kilmann-Saxton culture gaps, primary schools in the Czech Republic
($n = 262$)

Table 1 shows that the main culture gaps were identified in the following items of the School Culture Inventory: Motivation of teachers (1.3), Shared objectives, Managerial approach – control, and Communication with parents and stakeholders (1.2), followed by the items: Organizational structure and delegation and Collaboration among teachers in the school.

To assess the relations between the five selected dimensions = variables (Leadership and management, School environment, Communication, Relationships within the school, Innovation process and Expected results of education), bivariate Pearson correlation analysis was carried out. The correlation matrix was used to find the dependence among variables from our construct. Table 2 visualizes correlation coefficients between sets of variables - the dimensions of the School Culture Inventory.

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Table 2: Bivariate correlations among dimensions (variables) used in analysis, primary schools (*n* = 262)

Items	1	2	3	4	5
1 Leadership and management					
2 School environment	0.53				
3 Communication, including teacher motivation	0.65	0.64			
4 Relationships within the school	0.58	0.58	0.63		
5 Innovation process and expected results	0.56	0.62	0.63	0.56	
Mean	3.4	3.6	3.6	3.7	3.5
SD	0.52	0.54	0.59	0.60	0.47

Note. *p* < .05

Table 2 shows that all dimensions of the school culture construct have a moderate positive relationship with each other, including relationships between Leadership and management, and the Innovation process and Expected results dimension (r = .56). The highest positive relationships were found between the dimensions Leadership and management and Communication, including Teacher Motivation (r = .65).

To compare the difference between the Leadership and management dimension and the Innovation process and Expected results of the educational process dimension, the Mann–Whitney *U* test was applied between the two groups of schools according to their results in the Leadership and management dimension. The sample of respondents was split in half, according to their evaluation results in this dimension, and the test was used to verify the null hypothesis.

H10 There is no association between a positive evaluation of school culture in the Leadership and management dimension and positive expected results in the dimension focused on the innovation process and the expected results of the educational process.

H1A Schools with a positive evaluation of school culture in the Leadership and management dimension achieve significantly higher positive evaluations in the dimension focused on expected results in education.

Figure 2 shows the distribution of evaluation results in the Innovation process and Expected results of the educational process dimension, according to the two groups of leaders and their schools.

The first group of schools represents half the primary schools ($n = 131$), with higher evaluations by school leaders in the Leadership and management dimension. The second one is the opposite group.
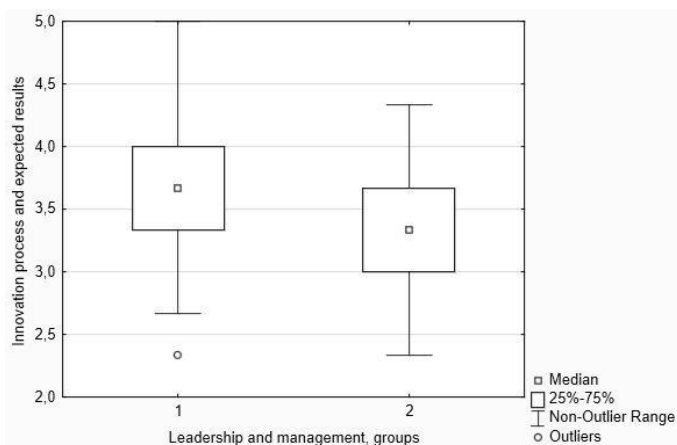
Figure 3: Two groups of primary schools divided according to Leadership and management

Figure 3 uses a boxplot visualization to graphically show the distribution of results in the Innovation process and Expected results of the educational process dimension for two groups of respondents from primary schools.

The median for groups of school leaders with higher evaluations in the sub-category Leadership and management was 3.75. The median for the second group of leaders from primary schools is 3.0. The box that comprises the middle 50% of results is smaller than the first group. Spacing between the distinct parts of this boxplot indicates the degree of dispersion and skewness in the data and displays an outlier.

To test whether there was a statistically significant difference between the two groups of leaders from primary schools in terms of their evaluation of the Leadership and management dimension to the results in the Innovation process and Expected results of the educational process dimension, the statistical non-parametric approach was used (the Mann–Whitney U-test). Following the Mann–Whitney results (Z-Score = 6.588, p = .0000 < .05), Hypothesis H10 was rejected and the alternative hypothesis H1A accepted, which indicates that a significant difference was found between the two groups of schools in the innovation process and the expected results of the educational process using self-evaluation of their leaders.

In addition, to test differences between the two groups of primary schools in terms of their evaluation of the Leadership and management dimension to results for other dimensions of school culture, the statistical non-parametric approach was also used (the Mann–Whitney U-test).

The results indicate significant differences between the two groups of primary school leaders in the School environment dimension (Z-Score = 6.733, p = .000 < .05), Communication, including Teacher motivation (Z-Score = 7.478, p = .000 < .05), and Relationships within the school (Z-Score = 6.344, p = .000 < .05).

In addition, an analysis of whether school size influences the outputs in the selected dimensions of the school culture investigation was made using the Kruskal-Wallis test. No statistically significant differences were found between the selected dimensions of school culture depending on the size of the school (3 categories) (null hypotheses were confirmed by the Kruskal-Wallis test).

Next, an analysis was made of whether the type of primary school influences the outputs in the selected sub-categories of the school culture investigation using the Mann–Whitney U-test. No statistically significant differences were found between these dimensions of the school culture depending on the size of the school (2 categories) (null hypotheses were confirmed by the Mann–Whitney U-test).

Discussion

Regarding the first research question, the results indicated that culture gaps in Czech primary schools were found primarily in the items Shared objectives, Managerial approach – control, and Communication with parents and stakeholders. The findings also show that school leaders should pay attention to items such as Organizational structure and delegation and Collaboration among teachers in the school.

This research also explored the relationships between the five dimensions using the School Culture Inventory (Table 2). As noted above, experts in the Czech Republic and other countries are seeking ways to improve schools and their performance. The key issues are, first, the role played by school leadership and management and, second, whether a positive relationship exists between leadership and management at primary schools and the innovation process and expected results of the educational process. The research showed positive and significant relationships between the Leadership and management dimension and the dimension of School innovation process and the Expected outcomes of the educational process.

This finding is supported by Bush (2013), Leithwood et al. (2006), and Peterson and Deal (1998) and confirms the important role of school management and leadership in relation to the expected performance of the educational process in schools (cf. Nielsen and Taggart, 2021; Pavlidou and Efstathiades, 2021; Wu and Shen, 2022). The research also found positive relationships between the dimensions Leadership and management and Communication, including Teacher motivation, similar to research by Lubis, Sagala, S., Saragih and Sagala, G. H (2021) in which trust building in school settings is further emphasized. In addition, results of previous research pinpoint the key elements of school culture (cf. Lee and Louis, 2019; Maslowski, 2006; Peterson and Deal, 1998) that have been linked with sustainable school improvement.

The dimensions of the School Culture Inventory also contains an item focused on teacher development that is a precondition for the innovation process and expected performance in education at each school. In practice, teacher development, teacher motivation and support of relationships within the school are connected with care for the most important school resource (cf. Blanuša Trošelj, Peić Papak, and Zuljan, 2021; Erichsen and Reynolds, 2020).

The findings contribute to the discussion of how the elements of a strong school culture are associated with levels of school achievement (Lee and Louis, 2021). The findings show that school leadership does play a decisive role. Fidler (2002, p. 103) argued "If the school's aims are widely shared across the school this probably means the school's culture is a strong one."

Moreover, positive relations were also found among all the other dimensions in the created construct of school culture. The construct meets key features (dimensions) of the school culture by Fidler (2002) and is also supported by previous research conducted by Louis et al. (2010).

The findings also indicate differences in the distribution of results in the dimension of Innovation process and the Expected results of the educational process for two selected groups of primary school leaders under the results of school leaders' self-evaluation in the Leadership and management dimension. A positive evaluation of school management and leadership yields higher than expected results in the dimension of Innovation process at schools and Expected results of the educational process. The findings of the study thus support the claim that the identified level of leadership and management in the construct of school culture determines and limits the expected results, which are an important part of the strategy.

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Because, as Schein (1985) stated, culture determines and limits strategy (cf. Ginevičius and Vaitkūnaitė, 2006).

The findings of this research are also in line with findings by Osiname (2018), who stated that successful leaders achieve their goals by collaborating and communicating with all stakeholders (internal and external) to establish a school community that is safe for teachers and pupils. The findings also confirm the results from a previous survey by Eger and Prášilová (2020) in which the school culture was evaluated by final-year students at the Faculties of Education from two universities after one month at the school.

The national context affects school leadership in many ways, and the effects of national context have been insufficiently explored in terms of school leadership (Hallinger, 2018; Shaked, 2021). The findings of this study support the results of research conducted, for example, by Janovská, Orosová and Janovský (2016) in Slovakia and partially that by Faas, Smith and Darmody (2018) in Ireland. Similarly, Zhu et al. (2014) found differences between Flemish and Chinese schools regarding school culture dimensions. Further research should take into account whether similar dimensions of a strong school culture exist in varying geographical jurisdictions.

Surprisingly, the additional analysis did not reveal an effect of school size or type of primary school on the relationship between the two main dimensions (variables) in this research sample, i. e., between Leadership and management and Expected results of the educational process. This finding does not align with the claim by Pavlidou and Efstathiades (2021) and opens up opportunities for further research, again in an international context.

Limitations

Two methodological limitations of the study warrant caution in interpretation of the results. First, the results of this study are relevant to primary schools in the Czech Republic (ICED 1 and 2). However, the results are important for understanding school culture and leaders' role in shaping school culture from an international point of view. A second methodological limitation of the research was a measure of the dimensions Innovation process and the Expected results of the teaching and learning process. In practice, the performance of the school would have been better represented by data from PISA, TIMSS or similar national comparisons of learning outcomes.

Conclusion and implications

This study extends and deepens the understanding of culture gaps in primary schools (ICED 1 and 2) and shows how it is possible evaluate not only current, but also desired, school culture as part of the self-evaluation process. It is hoped that the results of the research will provide new knowledge for improving the professional development of school leaders, based on findings from the application of the School Culture Inventory.

The practical application of the research lies in recognizing the current situation of school cultures, including culture gaps. The culture of an organization is a complex construct and contains tangible and intangible features and thus, in practice, tends to get less attention from leaders. In the field of education, leaders sometimes concentrate more on strategy, which is relatively easy to understand and create. Ignoring culture, however, leads to underperformance and may even lead to the school 'going out of business'. The results have important implications for recognizing the key role of school leaders in relation to the expected results of teaching and learning process. By confirming that schools with higher positive evaluation in the Leadership and management dimension achieve higher positive evaluations in the dimension of the educational process, the research also brings new knowledge for innovation in training school leaders.

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PARENT-TEACHER CONFERENCE AS A RHETORICAL CHALLENGE IN EDUCATIONAL PRACTICE

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Abstract/Izvleček
This paper analyses educator's communication skills during parent-teacher conferences in kindergarten. We researched the way educators communicate during twelve parent-teacher conferences in various kindergartens. In accordance with the methodology of qualitative research, chosen elements of educator's communication during the parent-teacher conferences were observed and recorded. Results showed that observed parent-teacher conferences are well-prepared, structured, substantially suitable and interactive, with apt vocabulary and elements of eloquence. The greatest shortcoming of the educator's communication was an underdeveloped active listening technique. Moreover, there were obvious differences in individual communication skills of the educators. The results of this research can serve as a tool for contemplating pedagogical practice in early childhood education.

Starševski sestanek kot retorični izziv v vzgojni praksi
V članku analiziramo komunikacijske sposobnosti vzgojiteljev/vzgojiteljic med starševskimi sestanki v vrtcih. V skladu z metodologijo kvalitativnega raziskovanja smo opazovali in zabeležili izbrane elemente komunikacije zaposlenih med 12 starševskimi sestanki v različnih vrtcih. Rezultati so pokazali, da so bili opazovani starševski sestanki dobro pripravljeni, strukturirani, primerni in interaktivni, izvedeni z ustreznim besediščem in elementi učinkovite govorne komunikacije. Največja pomanjkljivost komunikacije zaposlenih je bila nerazvita tehnika aktivnega poslušanja. Prav tako so bile očitne razlike v individualnih komunikacijskih spretnostih zaposlenih. Rezultati te raziskave lahko služijo kot orodje za razmišljanje o pedagoški praksi pri zgodnjem učenju in poučevanju.

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Introduction

An educator's profession manifests as relentless communication. First and foremost, it is communication with children (talking, storytelling, explaining, directing, describing etc.), but also with children's parents (when they bring their children to the facility or pick them up at the end of the day, during individual consultations or parent-teacher conferences etc.), with other members of the educational facility they work in (co-workers, various professionals, associates etc.) and with members of the local community (during collaborations in preparing public events or out-of-the-classroom activities etc.). The profession of educator therefore demands a high level of rhetorical and communication skills, which can be challenging or even difficult for some, especially in the area of cooperation with parents. Communication between educator and parents is a key factor in the quality of education in kindergarten. Research on the quality of kindergarten from the perspective of parents (Lepičnik Vodopivec, 2010) showed that, in addition to informal forms of communication and cooperation (such as short conversations between educators and parents on the arrival or departure of children), parent-teacher conferences are key factors in parental perception of kindergarten quality. In many of the communicational and performative tasks of educators, collaboration with parents seems to be the most challenging task (Ozman et al., 2016). Teachers point out that holding parent-teacher conferences is a special challenge if the parents have had a previous negative experience (Irvin et al. 2009). Therefore, to establish effective communication between educators and parents, one must work on it from the beginning of that interaction (Reardon, 1998; Bryan and Lynette, 2012). A well-prepared parent-teacher conference can become a more effective exchange when parents feel invited and encouraged to attend, which is necessary for their active participation in the conference (Stevens and Tollafield, 2003). Educators often find parent-teacher conferences stressful, tiring, and time consuming (Lemmer, 2012; Modrej and Cugmas 2015). Hence, educators bear the important task of continuously developing and broadening their communication skills (Graham-Clay, 2005). This is an essential tool for educators who want to be on good terms with parents, because choosing the right communication pattern helps in achieving one's goals, while also respecting other people's wishes and goals (Hargie, 2004).

Educators are public speakers because no matter whom they address, whether a child, a parent or a co-worker, their goal is to persuade another person about something, to share their ideas, views and thoughts with them (Petek, 2013, 2014). Furthermore, educators, just like public speakers, "perform" in front of an audience – they carefully prepare certain materials and share the information, while also being eager to convince their audience of their ideas, make an impression and be remembered. All this demands that educators have good communication skills and that they understand the rules of rhetoric.

The parent-teacher conference is a form of teacher collaboration with parents that takes place several times in the pedagogical year. It is an event at which parents are informed about their children's accomplishments, their behaviour at school/kindergarten, as well as the plans and activities, and deals with educating parents about pedagogical practices. Parent-teacher conferences can be classified according to various criteria, for example, the number of participants, the topic, the meeting style, set goals etc. There are conferences where goals include informing the parents about new topics, conferences where parents share parenting experiences and improve their parenting skills, conferences where the goal is simply hanging out with the children etc. Some parent-teacher conferences can be similar to classes and workshops; some can be demonstrational or communicational. Different types of parent-teacher conferences require different preparation methods and a level of communication skill on the part of educators (Milanović et al., 2014). For example, demonstrational parent-teacher conferences, in which the main goal is socialization of parents and children, are occasions with which many educators feel sufficiently confident because they are doing what they usually do. For parent-teacher conferences in the form of workshops, educators can turn to experts in various appropriate professions, whereas communicational parent-teacher conferences are considered the greatest challenge for educators. Communicational conferences require educators to have developed public speaking and presentation skills, as well as debating and organizational skills to initiate two-way communication during parent-teacher conferences (Rađenović and Smiljanić, 2007). Educators must also be prepared for disagreeing with parents, as it is unlikely that every parent will accept and approve of an educator's ideas, suggestions, or decisions.

The quality and success of the parent-teacher conference greatly depend on the educator's preparedness for the meeting (Graham-Clays, 2005). The fact that educators are mostly acquainted with their audience makes preparation easier.

Therefore, if they are organizing a communicational parent-teacher conference, they know how to distribute the parents in groups so as to avoid a situation in which nobody from a group wants to talk, or where there is a group in which everyone talks too much.

While organizing the meeting, the educator must plan for the duration of the meeting. Long speeches are tiring for any audience. In time-management, it is crucial to secure time for parents to process and summarize the given information, or to share their own ideas and points of view.

When preparing a parent-teacher conference, an educator must pay attention to the structure, which should reflect the rhythm of any conversation: it should have a beginning, development of the topic and an end (Juul, 2002), i.e., an introduction, core elements and a conclusion. The introduction has the role of motivating the audience to receive the message, introducing them to the topic of the conference, announcing key points and placing the topic into broader context (Škarić, 2000). The middle part is where all the main points are argued and where it becomes clear how developed the educator's communication skills really are (Škarić, 2000). Although it is extremely important to motivate parents to participate actively in parent-teacher conferences, and to give them a chance to express their opinions and comment on the topic, every person needs to have the choice to be active or passive in any form of communication. The educator needs to create her/his own way of motivating parents to participate in communication. Finally, before the end of the parent-teacher conference, it is important to analyse and briefly summarize all the main points, thank parents for coming, for their input and participation, and end the meeting with a closure (Škarić, 2000). Speaking style is as important as the topic (Gnjato, 2003). Speaking style is characterized by elements of expression: clarity, fluency, appropriate language and using correct terminology, but also by elements of speech: intensity, intonation, and tempo. Moreover, the educator's communication takes place in a public facility where children are being educated, so their speech must align with standard language, without using jargon, dialect, vernacular, etc. The capacity to know and use expressive elements of speech (core values of speech), which are dynamic, intonation, and speed of articulation, is also of utmost importance (Škarić, 2000).

To explore the communication and rhetorical aspect of parent-teacher conferences, we researched the way educators communicated during twelve parent-teacher conferences in various kindergartens. Results are discussed in the following part of this paper.

Rhetorical challenges in parent-teacher conference practice – a research overview

In this study, we sought to establish whether educators were aware of the importance and potential of good communication. We conducted research on 26 educators during 12 parent-teacher conferences in five early education facilities in Zagreb throughout June and September 2019. The sample for this study was non-probabilistic. Part of the sample was obtained by sending a request for participation to the e-mail addresses of principals and counsellors of early education facilities (kindergartens). Because data collection in this way was slow, most of the sample was collected using the "snowball technique". Educators or counsellors who agreed to conduct research contacted other institutions and suggested other educators. The study was conducted with the consent of the principal and the educator. The final sample was diverse in types of parent-teacher conferences. Most of the conferences were informational, two of them had a specific topic, while only one parent-teacher conference was communicational. Although the sample was homogeneous according to gender criteria, both male and female educators had equal opportunities to participate in the study. At the beginning of the parent-teacher conference, it was noted whether the educators had a master's degree in early and preschool education. In a sample of 26 educators at 12 parent-teacher conferences, only 3 had a master's degree in early and preschool education, while 23 had bachelor's degrees. Most parent-teacher conferences were attended by two educators (10). Only two were attended by three educators.

Research methodology

In accordance with the problem, we decided to do qualitative research and designed a monitoring scale especially for this study in order to systematically observe the variables. The scale "Educator's speech at the parent- teacher conference" has two parts: the first part of the scale consists of 13 statements and one sub statement, which helped us in determining the structure of the parent-teacher conference and the level of the educator's speech preparedness.

The second part of the scale measured the professionalism and flexibility of educators' communication using a three-degree Likert scale with negative polarization, and that part consists of 12 statements. Number 1 indicated the highest negative value (the absence of a certain phenomenon – never), while number 3 indicated the highest positive value – often.

The first half of the initial part of the scale related to the structure of the parent-teacher conference and consisted of seven statements, covering topics such as the presence or absence of greetings at the beginning and end of the conference, announcement of conference duration etc. (Table 1). The other half consisted of six statements on the fluency of the educator's speech. Others involved the use of assisting tools during the presentation, taking notes during the conference and reading from prepared notes (Table 2). The statements in the first part of the scale (13) had the characteristic of a test because a choice between confirmation or negation (represented or not represented) was offered. The second part of the scale focused on the communication itself, its expertise and adaptability. Some of the twelve statements that were measured were the intonation, speed and volume of the educator's speech, the presence of an active listening technique, and the frequency of using professional terminology or jargon in the educator's speech. A detailed presentation of the second part of the monitoring scale can be found in Table 3. At the end of the second part of the scale, we left space for notes, which proved useful during data analysis. Using the evaluation scale, we monitored the conference in progress without intervening or participating, and we noted representations or the lack of certain evaluation elements, as well as the frequency of certain phenomena that occur throughout communication.

Before the start of the parent-teacher conference, the educators were informed about the purpose and course of the research. They were also informed about the confidentiality of the data and the anonymity of the report. After the introductory information, the educators signed an agreement confirming that they were familiar with the details of the research, with which they agreed. In the introductory part of the parent-teacher conference, the educators introduced the researcher to the parents, or the researcher introduced himself and asked for their consent to conduct the study. At all parent-teacher conferences, the parents agreed that the study could be carried out. We tried to make the presence of the researcher at the conferences as inconspicuous as possible in order to keep conditions as natural as possible.

After the researcher was introduced at the beginning of the parent-teacher conference, he was present only as an observer and did not participate in interaction at the conferences.

The gathered data were divided into three groups according to the three questions that the research posed:

1. Do educators recognize the importance of well-structured parent-teacher conferences?
2. How well-prepared are these educators for speaking at the parent-teacher conference, and how much do they rely on their notes?
3. To what extent does the educator's speech deviate from the vocabulary of an educated and professional speaker?

The data were subsequently categorized for each statement to yield final frequencies. The part of the scale in which notes were added freely was cleared, and we kept only the notes that had proven to be significant and useful to the research.

Results, analysis and discussion

1. Parent-teacher conference structure

The first question of the research sought to understand whether educators recognized structure as an important part of a parent-teacher conference, as well as how much attention was paid to each of the structural parts of the conference (greeting, acknowledgement, announcements about conference duration and planned content, conclusion, and closure). The results show that all parent-teacher conferences open with a greeting. However, at only two conferences did the educator greet the parents as "Dear parents", as opposed to other conferences where the educators used neutral greetings such as "I wish you all a good evening", or "First, I would like to greet all of you." In most conferences (8/12), educators thanked everyone for coming. These results match Juul (2002) and Milanović et al. (2014), who emphasized the importance of the greeting as a sign of the educator's politeness, as well as the recognition of greeting as a tool for establishing communication with the parents, whose help and collaboration is invaluable.

The introductory part of the parent-teacher conference was monitored through the statement in which the educators announce the meeting's duration, and checked whether the given time frame was respected in practice.

Research shows that awareness is low among educators about time frames, announcing the meeting's duration, and respecting given timelines. The data says that duration was announced at only three parent-teacher conferences. In most of the other parent-teacher conferences, the duration was not announced, although the conference did not exceed the expected time frame (an hour or slightly longer). There was, however, one conference which lasted significantly longer, around two-and-a-half hours, which negatively affected parental motivation and attention.

This example shows that a small number of educators remains unaware of the importance of planning the duration of parent-teacher conferences, and respecting time frames, and that some educators cannot summarize and focus strictly on the topics from the conference's agenda. Also, during two parent-teacher conferences in which the educator failed to announce the duration time, some parents explicitly asked about the conference's duration. The statement about announcing the planned content of the parent-teacher conference was used to question the conference's structure. Although the answer is mostly affirmative (at 9 out of 12 conferences the educators announced what would be discussed), at one conference a parent asked the question directly, and the educator stated they would discuss it later in the meeting.

The conclusion of the educator's public speech at the parent-teacher conference is very important. Nonetheless, the gathered data show that the educators are slightly less aware of that fact.

Even though all but one parent-teacher conference ended with saying goodbye, only four conferences had a conclusion element where the educator summarized all that had been said in the meeting, and none of the meetings had an effective and memorable closure to leave an impression on the audience (parents). These data show that the parent-teacher conferences are mostly structured, but some parts are more elaborate than others. These educators understand the value of an introductory element but are still unaware that the ending is equally important. Table 1 shows the results that are considered useful and valuable.

Table 1: Parent-teacher conference structure

	YES	P-T conference (P1-P12)	NO	P-T conference (P1-P12)
The educator greets the parents at the beginning	12	everyone	-	-
"Dear parents"	2	P9, P11	10	P1, P2, P3, P4, P5, P6, P7, P8, P10, P12
"Respected parents"	0	no one	12	everyone
The educator thanks the parents for their response	8	P2, P3, P4, P5, P6, P9, P10, P11	4	P1, P7, P8, P12
The educator states the duration of the parent-teacher conference	3	P8, P10, P11	9	P1, P2, P3, P4, P5, P6, P7, P9, P12
The duration time of the parent-teacher conference is in sync with the announced time of duration	3	P8, P10, P11	1	P3
The educator briefly lists the topic of the parent-teacher conference	9	P1, P2, P3, P4, P5, P6, P9, P10, P12	3	P7, P8, P11
The educator ends the parent-teacher conference with a conclusion	4	P7, P10, P11, P12	8	P1, P2, P3, P4, P5, P6, P8, P9
The educator ends the parent-teacher conference with a closing	11	P1, P2, P3, P4, P5, P6, P8, P9, P10, P11, P12	1	P7

2. Speech preparedness at parent-teacher conferences

One of the factors for evaluation of advance preparation for parent-teacher conferences is monitoring the use of assisting tools, such as a projector, notes, brochures etc. (Škarić, 2000; Graham-Clay, 2005; Rađenović and Smiljanić, 2007). We found that many educators use assisting tools in conferences, in 11 out of 12 instances, while only one conference was held without any assisting tools. However, the tools in most frequent use are the educator's notes on paper (during seven conferences), while computers were used slightly less often (during four conferences)

This finding confirms other findings (Plazar, 2010) on the underrepresentation of digital technology in the work of educators, which may be influenced by various factors (e.g., lack or inadequacy of technique, lack of time, lack of skills). Nevertheless, another reason behind the choice to use or not use assisting tools might be the type of parent-teacher conference.

Having in mind that only two of the conferences were themed, and the educators' used computers in both, we can conclude that computers or projectors are used when content is new or unfamiliar to the parents, or for photographs and videos of the activities they talk about but cannot perform.

Furthermore, in conferences where computers or projectors were used, we also paid attention to whether educators named the sources for the information or the materials they provided, as well as noting their ability to summarize the content.

The results show that at both themed meetings, the educators understood the importance of a brief presentation of the written content, but in neither meeting did they state sources for the information. We might therefore conclude that educators have slightly less awareness of the importance of giving references in their presentations. Again, it is important to emphasize that two parent-teacher conferences are too small a sample to draw conclusions.

To make a better impression during presentations, it is advisable for the prepared content to be spoken as well as shown (Škarić, 2000). These scientific findings proved to be true in our research. In eight parent-teacher conferences the educators spoke while occasionally glancing at their notes, and in four conferences, they read the prepared content to the audience. On the other hand, taking notes during meetings was less common. Although educators took notes during three parent-teacher conferences, this does not show that they were unaware of the benefits of note-taking. To elaborate, most of the monitored parent-teacher conferences were informative, which meant that educators informed the parents about various topics, and parents were the ones taking the notes because of the nature of the conferences in question. That is why the incompatibility of the data on this statement might be caused by the type of conferences.

We can conclude that most of the educators come to parent-teacher conferences and speak well prepared, they are not nervous during conferences, and they feel confident as speakers and hosts. This can be the result of good preparation, which consequently makes them more skilled at public speaking.

In support of this are findings by Škarić (2000), who discusses anxiety and fear of public speaking, along with other findings (Modrej and Cugmas, 2015) that the preparation and implementation of a parent meeting can be very stressful. Educators who are not skilled public speakers will be more insecure, as well as those who did not prepare well or those who have a speech impediment (Škarić, 2000).

Furthermore, educators are aware that their fear is visible to their audience (the parents) because it manifests as a quiet or trembling voice, an uncontrolled pace and rhythm of speaking, pauses, errors, repetition etc., which makes them even more anxious. If we add the presence of a researcher, no matter how invisible they tried to be, the anxiety soars, and it is completely normal to feel it. Regardless of the educator's confidence in their role as host, fear of public speaking can be reduced through exercises, preparation and experience. Therefore, Caspe (2003) proposes educational programs for teachers/educators that actively encourage the development of communication skills. Furthermore, Lemmer (2012) points out that institutions should provide guidelines for teachers to improve parent-teacher conferences and hold regular in-service training on developing communication skills. Minke and Anderson (2003) discuss the lack of training for educators before and during their service and development of their communication skills for conducting parent-teacher conferences. Table 2 shows the final data on speech preparedness at parent-teacher conferences.

Table 2: Speech preparedness at parent-teacher conferences

	YES	Notes	Computer, projector	P-T conference (P1-P12)	NO	P-T conference (P1-P12)
The educator uses assisting tools during their presentation (projector, notes)	11	7	4	P1, P2, P3, P5	1	P4
The notes contain sources for the given information	-	-	-	-	2	P1, P5
The educator reads from their notes or presentation text	4	2	2	P3, P5, P6, P12	-	-
The educator is well prepared and only occasionally, or not at all, glances at their notes	8	-	-	P1, P4, P7, P8, P9, P10, P11, P12	4	P1, P7, P8, P12
The text on the presentation is concise	2	-	2	P1, P5	-	-
The educator takes notes during the parent-teacher conference	3	-	-	P9, P10, P11	9	P1, P2, P3, P4, P5, P6, P7, P8, P12

3. *The educator's speaking style*

The final statement in the study aimed at analysing the educator's speech, i.e., its rhetorical and other qualities, such as dynamism, speed, and intonation, the educator's communication skills, use of technology, active listening etc. We measured the final data using a three-degree Likert scale. The first statement that dealt with this question dealt with the use of terminology in the educator's speech.

During seven out of twelve parent-teacher conferences, the educators did not use professional terminology. In the other five meetings, such terminology was used occasionally (e.g., *regressive behaviour*), and in four out of five, the educators explained the meaning of the terms. Less representation of professional terminology in educator's speeches can be understood in more than one way.

The first explanation for this would be that the educators find their audience to be uneducated in their field and feel that professional terminology might be confusing. This explanation is also backed in previous research done by Milanović et al. (2014), where it is stated that speech should be adjusted to the varying educational level of the audience. Moreover, the results may be explained by the small number of these parent-teacher conferences in which the topic required the use of professional terminology (only two such conferences). Some authors (Daly and Vangelisti 2003) agree that using professional terminology is justified if it is needed to explain a new topic or problem, but all new terms should be explained to avoid misunderstanding. This view is shared by Ozmen et al. (2016), emphasizing that the use of professional terminology without explanation represents a communication barrier.

On the other hand, the lack of professional terminology in educators' speeches could also be seen as incompetence. We can ask ourselves if these results are due to the type of parent-teacher conference, or if the educators are unaware of the importance of using professional terminology when giving a speech to parents.

We also explored whether educators' speech was executed according to the standard Croatian language norm, where we paid attention to their use of jargon, dialect or vernacular language varieties. The results are ambiguous: we noted occasional use of non-standard expressions by educators in six parent-teacher conferences; in five conferences, there was no deviation from the norm, while in one particular conference the educator often used jargon.

In analysing the communication skills of educators, we used a set of questions about communication with parents, encouraging them to share their opinions and comment on the topic.

The final data confirms a high level of educator awareness about eliciting communication among parents, which was seen in all conferences. These educators encouraged communication occasionally in seven parent-teacher conferences, while in the remaining five conferences, they did it more often. However, the ways in which communication was encouraged varied significantly.

Most commonly, educators asked direct questions that parents were expected to answer. In a similar way, they sought parent's feedback and opinion on certain topics. In seven parent-teacher conferences, the educator explicitly asked parents for their opinion occasionally; in four conferences they requested it frequently, and in one conference such motivation was not present. However, the data on analysing the clarity of the information educators provided for parents are somewhat different. Even though in eight parent-teacher conferences the educators regularly checked if their message was understood, in four conferences the educators did not check at all whether they had been understood. Understanding the message is essential for keeping the parents' attention. Unfortunately, parents are shy and anxious about speaking at parent-teacher conferences, and these feelings are exacerbated if they are not offered a chance to speak by the educator. In all cases when parents expressed their thoughts and opinions, the educators reacted positively; they were calm and did not get annoyed or distressed.

Besides leaving enough time for questions and answers, it is important to allow for pauses within an educator's speech to encourage communication by the parents and to enhance the time required to process and understand information. Seven parent-teacher conferences had pauses in the speech, while the other five did not. Only two conferences had regular pauses.

Another important element of educator communication that we analysed in our research was the ability to actively listen to the speaking parent. Even though in ten parent-teacher conferences educators listened to parents, the results are compromised by the fact that in half the conferences, educators interrupted the parents as they were talking. This shows that even though educators are aware of the benefits and importance of an active listening technique, they have not quite mastered it.

A set of questions about the intonation, speed, and dynamism of educator's speeches aimed to analyse their awareness of speech expressiveness. It turned out that educators were most sensitive about speech dynamism. In all but one parent-teacher conference, we noted an adjustment of speech dynamism by the educators.

This implies that the educators were aware that they needed to be heard even by those in the back of the room. Moreover, in all conferences, we noted that the speech intonation varied. It was usually a moderate change (in nine conferences).

In one conference, the educator's speech was often too fast, which can be explained by the educator's anxiety. Accordingly, great excitement or fear during the parent-teacher conference can lead to a delivery being too quiet, or (as in this case) too fast. All this enables us to answer the third research question, i.e., to conclude that educators do try to speak eloquently, professionally, and with expression. They cautiously, but skilfully use professional terminology, they rarely use jargon, and their speech is of moderate tempo and dynamic. Educators understand the importance of including parents in conversation, so they often ask for parental opinion and commentary.

However, educators are slightly less aware of the importance of checking whether their speech was clear or not. Also, they should pay more attention to pauses in their speech, while also working on their active listening.

Table 3: The educator's speaking style at parent-teacher conferences

	Never	Sometimes	Often
The educator uses professional terminology in communication at parent-teacher conferences	7	5	-
The educator explains the meaning of professional terms	1 (P5)	4	-
The educator uses jargon in communication at parent-teacher conferences	5	6	1
The educator makes regular pauses in their speech so that parents can easily follow	5	5	2 (P1, P5)
The educator incites communication	-	7	5
- By asking questions	-	8	4
- By asking for feedback/commentary	1 (P5)	7	4
- By asking if everything is clear	4	6	2
The educator actively listens to parents when they speak	0	2	10
The educator interrupts parents when they speak	6	6	-
The educator becomes irritated by parents' questions	12	-	-
The educator changes their intonation while speaking	-	9	3
The educator speaks fast	7	4	1 (P12)
The educator speaks slowly	9	3	-
The educator speaks loud enough for everyone to hear	-	1	11

Conclusion

The study presented in this paper was conducted during twelve parent-teacher conferences in kindergartens in Zagreb, Croatia, where twenty-six educators participated as hosts, to determine whether educators were aware of the rhetorical element of their speaking performance during parent-teacher conferences. Results show that parent-teacher conferences are usually well-structured: they have a clear beginning, middle and end. However, some parts of the conferences are more elaborate than others: educators pay more attention to planning the introductory part of the parent-teacher conferences than they do for the end. Furthermore, educators are less aware of the temporal aspect of the conferences: they rarely set a timeline for parent-teacher conferences. Also, the educators did not improvise; their speeches were well prepared, and they glanced at their notes either occasionally, or not at all. Using computers or other assisting tools is uncommon. If they use presentations, the content on the slides is usually concise, but they do not give the source of the information. Finally, the educators' speeches are in accord with standard pronunciation; they use appropriate vocabulary, although the use of vernacular or jargon was noted in some speeches. The educators articulate correctly, their dynamic and tempo of speaking are appropriate, as well as the intonation. Professional terminology is used cautiously and not very often. What is especially encouraging is the two-way communication the educators try to establish with the parents. Still, the active listening technique is something that most educators lack, which is a significant downside of most parent-teacher conferences because the educators tend to interrupt the parents before they finish what they have to say. Further research is needed to understand the reasons for the underdeveloped skill of active listening in many educators, because the skill of active listening is a complex ability that includes factors of communication competence, but also social and emotional factors in the personality of an educator.

One limitation of this research is that educators from institutions in which research was conducted were chosen by the kindergarten principals or professional associates, so it is unclear whether the participants were representative of the whole profession, or if they were chosen as individuals who would best represent the kindergarten.

Also, we cannot disregard the possible subjectivity of the researcher in detecting and evaluating the data. It is obvious, nonetheless, that a sample of twelve parent-teacher conferences is insufficient to draw conclusions about the whole population of educators.

That is why further research is advised, to be conducted on a greater number of educators and with the tracking of conferences on a more systematic level, since the findings might be even more useful for understanding the issues introduced in this paper.

However, despite the limitations, the results of this research can be useful in pedagogy theory, as well as in practice. The results give educators insight into important structural features of parent-teacher conferences, but also pinpoint which elements constitute good communication at these conferences. Educators, therefore, have a chance to evaluate their own communication with parents at the conferences and improve those elements that could be better, or the quality of their verbal communication at parent-teacher conferences.

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NEKATERA STALIŠČA STROKOVNIH DELAVCEV DO AGILNOSTI NJIHOVEGA VZGOJNO-IZOBRAŽEVALNEGA ZAVODA

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Izvleček/Abstract Agilnost kot poseben način mišljenja in delovanja so oblikovali programerji, razširila pa se je tudi na pedagoško področje. Predstavljamo rezultate raziskave med 184 strokovnimi delavci različnih slovenskih vzgojno-izobraževalnih zavodov (VIZ) za namen ugotavljanja njihovih stališč o agilnosti VIZ. Rezultati kažejo, da se anketirani najbolj strinjajo s pozitivnimi dejanji, pozitivnimi čustvi in skrbi za otroke. Najbolj so neodločeni glede poenostavljanja stvari in problemov ter poudarjanja napak. Multivariatna analiza hierarhičnega združevanja v skupine je izpostavila tri skupine, ki opredeljujejo agilni VIZ. Poimenovali smo jih: posameznik in delovanje VIZ, pozitivna naravnanost ter primerna komunikacija. Vse skupine se nanašajo na človeške vire in potrjujejo trditev, da so največji izziv spremembe v ljudeh.

Some attitudes of professionals towards the agility of their educational institution Agility as a special way of thinking and acting was created by programmers and has spread to the pedagogical field. We are presenting the results of a survey among 184 professionals from various Slovenian educational institutions (EI) for the purpose of determining their attitudes towards the agility of EI. The results show that respondents agree the most with positive actions, positive emotions and care for children. They are most indecisive about simplifying issues and problems and highlighting mistakes. Based on multivariate hierarchic cluster analysis, we determined three clusters that, according to our research, define agile EI. We named them as follows: the individual and the operation of EI, positive mindset and adequate communication. All clusters relate to human resources and confirm the statement that the greatest challenge is to achieve change in people.

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Uvod

Veliko se razpravlja in raziskuje ustvarjalnost pedagoških delavcev, tj. vzgojiteljev in učiteljev (npr. Dolenc in Čehovin, 2020; Kožuh, 2018), manj pa imamo razprav o agilnosti, agilnem mišljenju ali agilni miselnosti strokovnih delavcev, agilnem vzgojno-izobraževalnem zavodu (VIZ) ipd. Zato opredeljujemo pojem agilnost, ki ga je predstavila skupina programerjev v začetku 20. stoletja pod imenom *Manifest agilnega razvoja programske opreme* (2001; v nadaljevanju *Manifest*, 2001) in analiziramo nekaj njegovih osnovnih značilnosti.

Agilnost je dokaj nov pojav, ki so ga najprej sprejeli podjetniki, nato pa se je razširil tudi na druga področja, tudi na pedagoško področje, zato se strinjamo, da potrebuje še veliko pozornosti praktikov in raziskovalcev (Aleksander, 2019). V ta namen smo opravili manjšo empirično kvantitativno neeksperimentalno raziskavo med strokovnimi delavci, ki se je usmerila na nekatera stališča o njihovem VIZ.

Začetek, posebnosti agilnosti in agilne miselnosti

Leta 2001 se je v mesto Snowbird (Utah, Združene države Amerike) za nekaj dni umaknilo 17 strokovnjakov s področja razvoja informacijskih programskih rešitev, ker so iskali nov način dela in razmišljanja kot odgovor na tradicionalno in togo mišljenje in delovanje (Kovač in Gajšek, 2019; Kupec, 2017; Milošević, 2016). Uporabili so pojem agilnost in oblikovali *Manifest* (2001), v katerem so predstavili štiri ključne vrednote, s katerimi so se strinjali.

Vrednote se nanašajo na:
– pomembnost medsebojne komunikacije, ki naj bo raje neposredna »pogovor iz oči v oči«;
– uporabo sodobne tehnologije, ki mora delovati in se dopolnjevati, kar ima prednost pred togim načrtovanjem in dokumentiranjem (Kupec, 2017), dodali bi, pred papirologijo, kot jo navajajo nekateri naši učitelji (Miklavčič, 2021);
– sodelovanje z uporabniki (Dolenc, 2018) ali na komunikacijo z vsemi uporabniki, ki je pomembnejša od različnih pravil, predpisov, zakonov ipd.;

–   odzivanje na spremembe, ki je tudi pomembnejše od togega sledenja načrtom. Menimo, da vrednota vključuje proaktivnost, recimo, kako identificiramo bodoče potrebe uporabnikov (Baum, Frese in Baron, 2007; Preša idr., 2019) ali kako hitro so se zaposleni pripravljeni učiti in odzivati ter prilagajati na spremembe (Šprajc in Podbregar, 2019), in sicer ne glede na zakone in pravilnike.

Predstavljene vrednote in iz njih izpeljana načela so osnova za agilno miselnost (razmišljanje ali mišljenje) (Kutnik, 2013), saj če je mišljenje proces ter če želimo problem rešiti hitro in učinkovito, mora biti naš proces mišljenja čim bolj pretočen (Đuvelek, b. l.).

Menijo (Denning, 2019; McIntosh, 2016), da se agilna miselnost bolj usmerja v prakso kot v teorijo, da jo je težko opredeliti, čeprav se pojem veliko uporablja (McIntosh, 2016), tudi zaradi številnih in različnih praks (Denning, 2019). Dodajajo, da agilno delovanje oblikujejo ljudje v ustanovah. Ljudje, ustanove in organizacije ter odnosi med njimi pa so zelo različni (COMPETO, b. l.) in se spreminjajo. Poleg poudarjanja tehnologije izpostavljajo ljudi in njihovo medsebojno delovanje (Trobok, 2019) in sodelovanje. Lahko bi povzeli, da je poudarek na praktičnem znanju in izkušenjskem učenju. Crawford (2019) je, recimo, zapisal, da je praktično znanje vedno vezano na izkušnje določene osebe in da ga ni mogoče prenesti, ampak ga lahko samo živimo.

Kljub poudarjanju pragmatizma ter navedbi, da je agilna miselnost bolj pragmatična znanost (Denning, 2019), nekateri iščejo tudi teoretične podlage. Balas Rant idr. (2019) kot osnovo navajajo neopiagetovsko šolo razvoja odraslih, ki jo je preučevala Jane Loevinger. Izpostavila je, da se z odraslostjo kognitivni, afektivni in vedenjski razvoj lahko nadaljuje, za kar pa je potreben precejšen napor; in če se nadaljuje, »posameznik naravnano evolucijsko prehaja k bolj integriranemu in agilnemu mišljenju, čustvovanju in delovanju« (prav tam, str. 15).

Lahko bi navedli, da je agilna miselnost celostni in medsebojno povezani razvoj, ki vključuje različne dimenzije. Reams (2017, v Balas Rant idr., 2019, str. 17) je agilno miselnost povezal z agilnostjo posameznika in izpostavil agilnost v mislih (kar bi lahko poimenovali kognitivna dimenzija), čustvovanju (afektivna dimenzija), odločanju in vedenju (vedenjska ali akcijska dimenzija), ki se lahko razvijajo skozi celo življenje. Dodajamo še duhovno dimenzijo, ki se danes ponovno poudarja in jo povezujejo z duhovno inteligenco (Zohar in Marshall, 2000), vendar je ne enačijo z religioznostjo (Košir, 2020; Musek, 2006a, 2006b).

Za ponazoritev povezanosti in prepletenosti različnih dimenzij dodajamo misel Csikszentmihalyina (2019, str. 24): »Vse kar doživljamo, se v našem umu ponazori kot informacija, pa naj gre za veselje ali bolečino, zanimanje ali zdolgočasenost.«

Agilno miselnost predstavljajo tudi kot zbirko odnosov ali kot niz stališč, ki podpirajo rastoče delovno okolje (Balas Rant idr., 2019; McIntosh, 2016), pa tudi kot način razmišljanja, ki postane način življenja (Howard, 2015).

V uvodniku zbornika z naslovom *Agilna organizacija* (Sitar idr., 2019) lahko preberemo, da vse pogostejše spremembe v okolju, spremembe potreb uporabnikov in drugih déležnikov zahtevajo hitrejše in prožnejše odzivanje ter prilagajanje posameznikov in ustanov, zato znanstveniki iščejo nove načine dela, med katerimi so tudi agilno mišljenje, agilni pristopi, agilno delovanje.

McIntosh (2016) je zapisala, da pojem težko opredelimo, zato je izpostavila nekaj ključnih značilnosti, kot so: spoštovanje, sodelovanje, izboljševanje, osredinjenost na zagotavljanje vrednot, sposobnost sprejeti spremembe in se nanje prilagajati, kar je izpostavljeno v četrti vrednoti *Manifesta* (2001). Kot značilnosti pa navajajo tudi pozitivni odnos, po besedah McIntosh (2016) tudi učni proces oziroma željo po znanju, stalno, vseživljenjsko učenje ter pripravljenost na napake (Howard, 2015) in neuspeh ter njihovo sprejemanje, ko ni pomembno, kdo je zgrešil, ampak je pomembna rešitev problema.

Denning (2019) je poudaril še pomen inoviranja in dobre organizacije skupin, cilje in uspeh skupine ali tima, čeprav je pomemben tudi posameznik, ter sodelovanje v interaktivnih mrežah ali mreženje. Agilnost spodbuja tudi drugačne odnose in pričakovanja pri zaposlenih, navajata Šprajc in Podbregar (2019).

Agilna miselnost predstavlja spremembo smeri razmišljanja (Trobok, 2019), nismo le kritični in analitični v mišljenju, smo tudi ustvarjalni in inovativni v razmišljanju in reševanju problemov ali da uporabljamo strateško mišljenje (Kovačič, 2018). Ustvarjalno in pozitivno se odzivamo na spremembe v tem negotovem in turbolentnem okolju (Savitha in Nair, 2020).

Menijo, da pojem agilna miselnost vključuje učinkovito kombinacijo strategij, kulture, praks, tehnologije ipd., ki omogočajo agilno delovanje (Balas Rant idr., 2019). Delovanje je izpostavljal tudi de Bono (2018, str. 215), ki je zapisal: »Od možnosti se premaknemo k neposrednemu snovanju akcije.«

Pojem agilna miselnost ali mišljenje se je že kar udomačil v slovenski literaturi. Lahko bi ga poslovenili kot prožno, okretno ali rastoče mišljenje. Menijo, da je agilnost širši pojem od fleksibilnosti, saj pomeni sposobnost hitrega prilagajanja nenačrtovanim in nenadnim spremembam, medtem ko fleksibilnost označuje preusmeritev od ene naloge k drugi nalogi (Tsourveloudis in Valavanis 2002, v Balas Rant idr., 2019).

Omenili smo, da so drugačno mišljenje začeli razvijati programerji, da so ga hitro sprejeli podjetniki in da se postopoma širi tudi na druga področja, tudi na pedagoško (npr. Savitha in Nair, 2020; Sušec, 2019). Ali – kot je zapisal Prieto (v Sušec, 2019) – da je agilnost način vedenja, kultura in miselnost ter da to kulturo lahko uvedemo v vsako ustanovo, torej tudi v vsak VIZ. Zato nas je zanimalo, kakšna stališča imajo strokovni delavci o svojem VIZ.

Raziskava o agilnosti VIZ

Problem, namen in cilji
Na pedagoškem področju imamo še veliko možnosti raziskovanja agilne miselnosti in agilnega VIZ. Ker menimo, da imajo agilni strokovni delavci ugodno okolje za svoj celostni razvoj le v agilnem VIZ, nas je zanimalo, kakšna so njihova stališča do VIZ ter kako se nekatera stališča združujejo oz. grupirajo.

Metodologija
Usmerili smo se na deskriptivno in kavzalno neeksperimentalno kvantitativno metodo pedagoškega raziskovanja.

Za namen raziskave smo oblikovali kratek vprašalnik, ki je bil kombinacija anketnih vprašanj odprtega in zaprtega tipa ter sklop trditev (dalje t) v obliki petstopenjske lestvice stališč Likertovega tipa, z odgovori od močnega strinjanja (ocena 5) do močnega nestrinjanja (ocena 1).

Trditve smo oblikovali na osnovi strokovne literature, to naj bi ustrezalo vsebinski veljavnosti vprašalnika. Zanesljivost vprašalnika smo preverili s Cronbachovim koeficientom alfa. Upoštevali smo ugotovitve, da se vrednost koeficienta alfa spreminja glede na število in sestavo postavk ter velikost vzorca in glede na dolžino instrumenta (Šerbetar in Sedlar, 2016), zato smo z zanesljivostjo, ki jo je pokazal (α = 0,881), zelo zadovoljni. Objektivnost vprašalnika je omogočal večinoma zaprti tip vprašanj.

Vprašalnik je izpolnilo 184 strokovnih delavcev. Večina (41,3 %) anketiranih je bila srednje starosti, le eden starejši, nad 61 let, in nekaj tudi mlajših od 30 let (8,7 %). Večina je bila iz osnovne šole (OŠ) (81,5 %), nato iz vrtca (11,4 %) in le dva iz srednje šole. VIZ so bili v mestu (46,4 %), na vasi (38,3 %), manj v predmestju (15,3 %); spadali so v različne slovenske regije.

Sodelovale so v glavnem ženske (178) in le 5 moških, s tem da eden ni označil svojega spola.

Po stopnji izobrazbe je bila skoraj polovica anketiranih z univerzitetno stopnjo izobrazbe, dva s srednjo vzgojiteljsko in štirje z znanstvenim magisterijem. 80 je bilo profesorjev (prof.) razrednega pouka (RP), 22 strokovnih delavcev (npr. pedagogi, socialni pedagogi, inkluzivni pedagogi ipd. in eden ravnatelj). Vzgojiteljev in pomočnikov vzgojiteljev je bilo 19, profesorjev (prof.) različnih učnih predmetov pa 17.

Zbiranje podatkov je potekalo posredno, preko anketarjev, ki so bili študenti ene od pedagoških fakultet v Sloveniji, ko so bili na praksi. Vsak študent je bil naprošen, da nagovori v svoji ustanovi od enega strokovnega delavca do tri strokovne delavce, da izpolnijo vprašalnik.

Vzorec je glede na način zbiranja podatkov nereprezentativen in priložnosten, saj so sodelovali le posamezniki, ki so si vzeli nekaj minut časa za izpolnitev vprašalnika.

Podatke smo obdelali na osnovi opisne statistke. Za nominalne spremenljivke smo izračunali število in odstotke. Pri ordinalnih spremenljivkah smo zanemarili pogoj, da niso prave numerične spremenljivke in smo uporabili navedbo najnižjega rezultata (min.) in najvišjega rezultata (max.), aritmetično sredino (M), standardni odklon (SD), koeficient asimetrije (KA) in koeficient sploščenosti (KS). Pri multivariatni statistiki smo uporabili hierarhično metodo združevanja v skupine, Wardovo metodo, ki temelji na združevanju čim bolj homogenih skupin in omogoča tudi nazorno grafično predstavitev rezultatov z drevesnim združevanjem (dendrogramom).

Rezultati in razprava

Opisna statistika in razlaga odgovorov
V preglednici 1 vidimo, da prevladujejo visoke aritmetične sredine, ki kažejo na v glavnem strinjanje z napisanimi trditvami ali na prevlado neodločenega odgovora.

Vse aritmetične sredine so vedno ali za vse trditve nad srednjo oceno 3, ki označuje neodločenost. Podoben, kot so rezultati v preglednici 1, je bil tudi komentar ene vzgojiteljice: »Veliko odgovorov je mogoče oceniti kot strinjanje, saj pri vsakdanjem delu in življenju ni vedno tako, želimo pa si spodbud, razumevanja in strpnosti.« Zapis lahko razlagamo, da so anketirani označevali tudi svoje želje, pričakovanja in ne le stališče do svojega VIZ.

Da so VIZ hierarhično organizirani (t 1), se večinoma strinjajo (M = 4,05). V literaturi pa se poudarja tudi decentralizacija, distribuirano vodenje ipd. teme (npr. Bolden, 2011; Harris, 2008).

Na t 2, da se VIZ prilagaja na spremembe in jih sprejema, se je tudi večina strinjala (M = 4,26). Za sedanji čas in prostor se v poslovnem svetu uporablja kratica VUCA (angl. **v**olatility, uncertainty, complexity, ambiguity) oz. volatilni, negotovi, kompleksni in dvoumni čas (Kutnik, 2021), ki najbolj opiše svet in čas neprestanih sprememb, v katerem živimo in delamo (COMPETO, b. l.). Na spremembe pa se moramo odzivati ustvarjalno in pozitivno (Savitha in Nair, 2020), biti do njih odprti (Dolenc, 2918), ker je prilagajanje spremembam pomembnejše od sledenja načrtom (Kovačič, 2018; Kutnik, 2013), to pa je navedeno tudi v *Manifestu* (2001).

Da je komunikacija v glavnem posredna (t 3), smo dobili eno nižjih aritmetičnih sredin, ki kaže na neodločenost oz. niti strinjanje niti nestrinjanje s trditvijo. Ena vzgojiteljica je t 3 komentirala z besedami: »Komunikacija je tudi neposredna.« Komentar kaže na njeno dobro razumevanje in poznavanje komunikacije. Ena od prof. pa je zapisala, da imajo »tudi kolegij v živo.« Neposredna, medsebojna komunikacija in interakcija je poudarjena tudi v prvi vrednoti *Manifesta* (2001). Zagovorniki agilnega mišljenja izpostavljajo pomembnost izboljšanja načinov komuniciranja ter neposreden »pretok informacij« (Bervar Kotolenko idr., 2020).

Strinjanje zasledimo tudi pri t 4, da uporabljajo sodobno tehnologijo (M = 4,30), nekoliko nižje povprečje (M = 4,20) pa je pri t 5, da se tehnologija stalno dopolnjuje. Ker smo priče nepredvidljivosti, negotovosti, kompleksnosti in nejasnosti (Kovač in Gajšek, 2019), mora človek po besedah Jensona (1998, str. 220) »[...] v vsaki odločujoči situaciji obvladati sposobnost prilagajanja. Na ustrezen način se mora prilagoditi tako spremembam kot napakam.« Tudi McIntosh (2016) poudarja sposobnost sprejeti spremembe. Dodali bi, da jih moramo sprejemati kot nekaj stalnega, če je že Heraklit rekel, da ni nič tako stalnega, kot so spremembe (v Jenson, 1998).

Preglednica 1: Opisna statistika odgovorov na trditve (od t 1 do t 20), (ocene od 5 – se zelo strinjam, do ocene 1 – se zelo ne strinjam)

Trditve (od t 1 do t 20)	n	min.	max.	M	SD	KA	KS
t 1: Vzgojno-izobraževalna ustanova je hierarhično organizirana.	173	2	5	4,05	0,895	−0,584	−0,520
t 2: Vzgojno-izobraževalna ustanova sprejema in se prilagaja na spremembe.	184	1	5	4,26	0,852	−1,213	1,602
t 3: Komunikacija je v glavnem posredna, preko različnih pisnih sporočil in informacij.	183	1	5	3,45	1,142	−0,332	−0,754
t 4: Uporabljamo sodobno tehnologijo.	183	2	5	4,30	0,792	−0,914	0,209
t 5: Tehnologija se stalno dopolnjuje.	184	1	5	4,20	0,957	−1,094	0,571
t 6: Delovno okolje je spodbudno.	183	1	5	4,30	0,820	−1,212	1,764
t 7: Skrb se posveča kulturi organizacije.	183	1	5	3,93	0,832	−0,559	0,484
t 8: Poenostavljamo stvari in probleme.	184	1	5	3,38	1,065	−0,233	−0,537
t 9: Posamezniki smo motivirani za delo.	183	2	5	4,22	0,726	−0,545	−0,320
t 10: Delovne skupine se samoorganizirajo.	183	1	5	3,92	0,795	−0,659	0,677
t 11: Delovne skupine so medgeneracijsko oblikovane.	184	1	5	3,84	1,036	−0,693	−0,169
t 12: Skrb se posveča medsebojnemu sodelovanju.	183	1	5	4,16	0,833	−0,996	1,302
t 13: Napake pri delu se ne poudarjajo.	183	1	5	3,39	0,988	−0,339	−0,349
t 14: Spodbuja se učenje drug od drugega.	183	1	5	4,13	0,890	−0,723	−0,121
t 15: Usmerjeni smo v trajnostni razvoj.	184	2	5	4,12	0,773	−0,569	−0,120
t 16: Glavna skrb je namenjena otrokom/učencem.	184	2	5	4,42	0,764	−1,336	1,480
t 17: Spodbujajo se pozitivna dejanja.	184	2	5	4,51	0,724	−1,371	1,271
t 18: Pomembna so pozitivna čustva.	182	1	5	4,41	0,801	−1,471	2,203
t 19: Skrb se posveča celostnemu razvoju posameznika.	183	1	5	4,10	0,865	−0,707	0,056
t 20: Skrbi se tudi za duhovni razvoj vsakega posameznika.	182	1	5	3,51	1,060	−0,296	−0,551

T 6 se nanaša na spodbudno delovno ali učno okolje (M = 4,30). Strinjanje s trditvijo nas veseli, saj se le v spodbudnem učnem okolju lahko po našem mnenju izražamo, smo inovativni in ustvarjalni. Ali kot je zapisala prof. RP: »Če želimo učencem ustvariti varno in spodbudno učno okolje, moramo najprej poskrbeti, da bodo takšno okolje imeli tudi vsi zaposleni. Zadovoljni, slišani zaposleni, so zadovoljni in motivirani učenci.«

T 7 se nanaša na kulturo ustanove, ki jo je treba stalno razvijati. Menijo, naj bi agilna kultura VIZ omogočala stalno izboljševanje (Howard, 2015) ali rast posameznika in tima ter naj bi vključevala spoštovanje (McIntosh, 2016), tj. spoštovanje kolegov, spoštovanje uporabnikov, ter dopuščala eksperimentiranje, napake, razvijala odgovornost zaposlenih ter predvsem neprestano učenje in razvijanje kompetenc (Bervar Kotolenko idr., 2020). Zato uporabljajo tudi pojem rastoča kultura (Salvetti in Bertagni, 2020), ki naj navdihuje ljudi, da sodelujejo, prispevajo s svojimi talenti in navdušenjem, globoko povezanostjo ter z vzajemnim delovanjem. Kultura naj bo oblikovana tako, da spodbuja komunikacijo in interakcijo, saj tudi različne raziskave (npr. Brust Nemet, 2018; Javornik Krečič, 2008) kažejo, da na šolsko kulturo najbolj vpliva kakovost komunikacije med učitelji, sodelovanje med njimi ter kolegialnost. Podobno mnenje smo zasledili v komentarju prof. RP: »Vzgojno-izobraževalne ustanove naredijo predvsem ljudje – zaposleni. Če je med njimi dobro sodelovanje, so vse težave rešljive.« Podobno je bilo tudi mnenje druge prof. RP: »Spodbujanje medsebojnega sodelovanja in povezovanja med sodelavci, na splošno, bi bilo treba nekoliko bolj spodbujati.«

Zanimivi so rezultati na t 8, da poenostavljajo stvari in probleme. Tu se večina ni mogla odločiti, ali se strinja ali ne s trditvijo, zato smo dobili primerjalno najnižjo M (M = 3,38) in razpršenost odgovorov (SD = 1,065). Primerjalno najnižja povprečna vrednost kaže na to, da pedagoški delavci morda ne ravno poenostavljamo stvari in probleme, kar naj bi veljalo pri agilni miselnosti. Prof. RP je trditev komentirala z besedami: »Se jih lotevamo […].« Ena vzgojiteljica: »Včasih se problemov ne da poenostaviti.« Komentar je v nasprotju z agilno miselnostjo in pozitivno naravnanostjo, da se vse da, če se hoče.

Rezultat (M = 4,22) na t 9, da so posamezniki motivirani za delo, lahko prenesemo tudi na vzorec, da so sodelovali motivirani respondenti.

Na t 10 o skupinah, ki se samoorganizirajo (M = 3,92), smo dobili nekoliko nižje povprečje. Menijo, da so samorganizirane skupine navadno bolj učinkovite, se dajo prilagajati, po drugi strani pa niso trajne.

Odgovori na t 11 o medgeneracijskem oblikovanju skupin kažejo bolj prevlado neodločenega odgovora (M = 3,84). Prof. RP je zapisala: »Po navodilu vodstva.« Menimo, da so medgeneracijske skupine lahko bolj učinkovite, ker so kombinacija znanja in izkušenj.

Anketirani se pa strinjajo, da se skrb posveča medsebojnemu sodelovanju (M = 4,16) (t 12). Csikszentmihalyi (2019) poroča, da so raziskave večkrat dokazale, da je kakovost življenja najbolj odvisna od tega, kako doživljamo delo in svoje odnose z drugimi ter da najpodrobnejše informacije o tem, kdo smo kot posamezniki, pridobimo od ljudi, s katerimi komuniciramo, in iz načina, kako opravljamo svoje delo. Misel dopolnjujemo s komentarjem socialne delavke: »Za kvalitetno delo v vzgojno-izobraževalni ustanovi so zelo pomembni medsebojni spoštljivi odnosi med učitelji, pozitivna naravnanost, to tudi oblikuje šolsko klimo in tako se potem odzivajo tudi učenci in z njimi tudi starši.«

Da se napake pri delu ne poudarjajo, je misel t 13, ki je primerjalno prejela eno nižjih aritmetičnih sredin (M = 3,39). Prevlada neodločenega odgovora nakazuje, da še vedno nismo spremenili pogleda na napake. Agilno mišljenje poudarja delovanje, akcijo, pri čemer pa delamo tudi napake oz. se motimo. Strokovnjaki (npr. Howard, 2015; McIntosh, 2016) navajajo, da so napake pozitivne, če se iz njih nekaj naučimo, kar je bil tudi komentar ene prof. RP. Menimo, da je tudi strokovnemu delavcu treba omogočiti, da eksperimentira, da se počuti sigurnega, tudi če kaj zgreši (Trobok, 2019). Napake zato niso podvržene kritiki, temveč nudijo možnost za učenje in izboljševanje ali za rast posameznika. Zato naj napak ne bi izpostavljali, niti jih skrivali pred drugimi, saj se tudi drugi lahko nekaj naučijo iz naših napak, kar kaže, da naj bi zaupali drug drugemu in med seboj sodelovali. Navedeno potrjuje tudi Crawford (2019), ki govori o pomembnosti neuspeha, ki da je sestavni del resničnosti, in dodaja, da nas neuspehi pogosto prisilijo, da za pomoč prosimo nekoga drugega. To pa nas naredi ponižne in hvaležne.

Na t 14, da se spodbuja učenje drug od drugega, smo dobili prevlado strinjanja s trditvijo (M = 4,13) ter komentar: »Res se učimo tudi drug od drugega.« Podoben rezultat je tudi za t 15, da so usmerjeni v trajnostni razvoj (M = 4,12). Trajnostni razvoj je poudarjen tudi v enem od načel *Manifesta* (2001). Wolhuter (2022) meni, da je pojem kot mantra svetovne skupnosti in skupni imenovalec za vse izzive človeštva.

Najvišje povprečne ocene zasledimo pri treh zaporedno navedenih trditvah (t 16, t 17 in t 18). Rezultat na t 16, da je glavna skrb namenjena otrokom oz. učencem, je dosegel visoko aritmetično sredino (M = 4,42); nihče od anketiranih ni izrazil močnega nestrinjanja s trditvijo. Dodan je bil komentar ene prof., da se skrb posveča: »Tudi vsem ostalim v pedagoškem trikotniku.« Mogoče je anketiranka imela v mislih tudi starše in strokovne delavce. Odgovori so v povezavi s tretjo vrednoto *Manifesta* (2001), ki se nanaša na usmeritev na uporabnike. Trditev (t 17), da se spodbujajo pozitivna dejanja, je dosegla najvišje povprečje (M = 4,51); nihče ni izrazil močnega nestrinjanja. Rezultat kaže, da se anketirani v glavnem strinjajo, da so naravnani v pozitivna dejanja, zato upamo, da tako tudi ravnajo. S t 17 je povezana tudi t 18, ki se nanaša na pomembnost pozitivnih čustev in je prejela tudi visoko povprečno vrednost (M = 4,41). Kot menita Zohar in Marshall (2000, str. 42), besede, kot so sočutje, mir, radost, ljubezen »merijo na veliko več, kot znamo izraziti« in pomenijo »odkriti globje plasti nas samih, kot so tiste, v katerih običajno živimo«. Egli (1998) je za ljubezen kot eno najbolj pozitivnih čustev zapisal, da je ljubezen neomejena energija, najmočnejša sila, popolna varnost, enost in neločenost, odgovor na vsa vprašanja in rešitev vseh težav. Dodal je (prav tam, str. 161): »Ljubezen do sebe in do vseh drugih nam omogoča doseči cilje z najmanj časa in napora,« pa tudi (prav tam): »Nič ni preprostejšega od ljubezni, nič ni učinkovitejšega od nje.«

T 19 se nanaša na celostni razvoj posameznika (M = 4,10). Pri celostnem razvoju smo že izpostavili štiri dimenzije: kognitivno, delovanje ali akcijsko, afektivno in duhovno dimenzijo ter njihove medsebojne vplive in povezovanje. Velik vpliv imajo navedene dimenzije tudi na naše fizično telo (motorična dimenzija) in na duševno zdravje. Na trditev t 19 smo dobili komentar: »Menim, da je vsak posameznik sam odgovoren za svoj razvoj.«

S t 19 se povezuje t 20, da se skrb namenja tudi duhovnemu razvoju posameznika. Rezultat (M = 3,51) kaže neodločenost anketiranih. Dobili pa smo tudi podoben komentar iste anketiranke kot na t 19: »Menim, da vsak posameznik sam skrbi za svoj duhovni razvoj, če tako želi oz. čuti.« Kononenko (2006) je zapisal, da je duhovni pogled na svet temelj vseh učenj velikih modrecev, pomembnih filozofskih in religioznih šol ter svetih besedil vzhoda in zahoda in da vse duhovne šole temeljijo na enakih osnovnih principih, cilj pa je vsem preseganje omejenega ega. Musek (2006a) pa je zapisal, da je bilo duhovno doživljanje znanstveno skoraj zanemarjeno, ker je duhovnost težko znanstveno raziskovati. Toda sam je pokazal, da je tudi to področje možno znanstveno oz. tudi empirično raziskovati (Musek, 2006b).

Po drugi strani pa zasledimo tudi misel: »Čim resnejši je dogodek v smislu posledic za osebo, tem verjetneje je, da bodo vprašanja duhovnosti aktivirana.« (Schwarz, 2002, v Cvetek, 2009, str. 326)

Če povzamemo, smo najvišje povprečje dobili pri treh trditvah (t 16, t 17 in t 18), ki se nanašajo na usmeritev na otroke, usmeritev in spodbujanje pozitivnih dejanj ter na pomembnost pozitivnih čustev. Pri nobeni trditvi pa aritmetična sredina ni bila manjša od sredinske ocene 3, kar kaže, da so se anketirani v povprečju strinjali z navedenimi trditvami ali bili pri nekaterih neodločeni.

Grupiranje stališč

Zanimalo nas je povezovanje in grupiranje odgovorov na stališča. Ne glede na arbitralno število skupin smo dobili podobno strukturo povezav. Razporeditev v 3 skupine (slika 1) kaže, da izstopa komunikacija, ki jo predstavlja ena sama trditev (t 3), ki se povezuje z drugo in prvo skupino. Drugo skupino predstavljajo tri trditve (t 8, t 20 in t 13). Največ trditev na različnih nivojih povezav pa vključuje prva skupina.
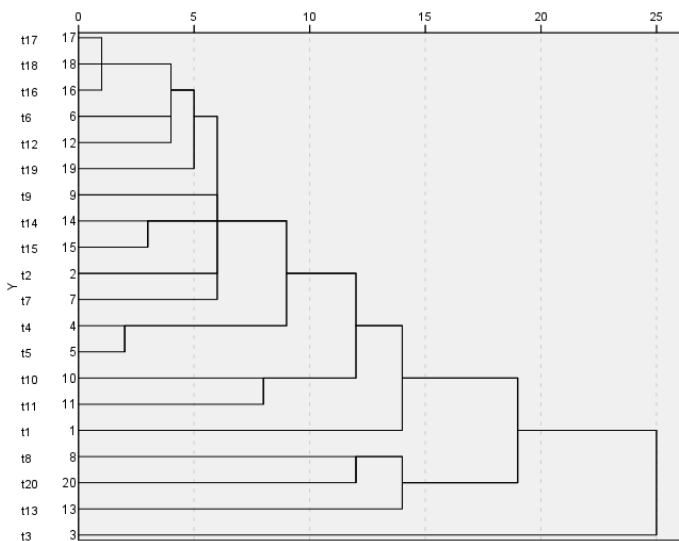
Slika 1: Drevo združevanja (dendrogram) odgovorov na trditve

Prva skupina na prvem nivoju povezuje tri trditve z najvišjim povprečjem ocen (t 17, t 18 in t 16), ki se nanašajo na pozitivna dejanja, pozitivna čustva ter na usmerjenost k uporabnikom. S trditvami se povezujeta t 6 in t 12: spodbudno okolje in medsebojno sodelovaje, z navedenimi pa t 19 o celostnem razvoju. Skupaj se povezujeta tudi trditvi t 4 in t 5, ki se nanašata na tehnologijo.

V tej skupini izstopa t 1 o hierarhični organizaciji, ki se na koncu povezuje z vsemi drugimi skupinami, kar razlagamo, da je organizacija tista krovna, ki vse povezuje. Predpostavljamo, da je od nje vse odvisno. Zato smo skupino poimenovali posameznik in delovanje VIZ.

Drugo skupino, kot smo zapisali, sestavljajo 3 trditve (t 8 in t 20, s katerima se povezuje t 13). Ena izmed razlag bi bila, da če skrbimo za duhovni razvoj (t 20), bomo bolj poenostavljali stvari in probleme (t 8), in če to dvoje delamo, potem nas tudi ne bodo skrbele napake oz. jih ne bomo poudarjali (t 13). Razlagamo, da so vse tri trditve povezane z drugačno, pozitivno naravnanostjo pedagoških in strokovnih delavcev. Skupino poimenujemo pozitivna naravnanost. Tudi agilno mišljenje temelji na prehajanju na pozitivne misli, pozitivna čustva, pozitivna dejanja in na pozitivnih odnosih (Howard, 2015). Howard (prav tam) je tudi zapisala, da kar v začetku lahko izgleda negativno, se kasneje morda pokaže kot možnost za izboljšanje. Pozitivno naravnanost smo zasledili tudi v dveh komentarjih vzgojiteljic: »Menim, da bi morale biti vse vzgojno-izobraževalne ustanove pozitivno naravnane, skrbeti za celostni razvoj svojega kadra, pozitivno čustveno klimo in poskrbeti za konstruktivno kritiko posameznika.« Druga pa je zapisala: »Še vedno pa verjamem, da je pozitivna naravnanost ključ do uspeha vseh vključenih.«

Če povzamemo Kahnemana (2016) in njegov pogled prenesemo na raziskavo, sta prednosti pozitivne naravnanosti vzdržljivost in vztrajnost, ko naleti na ovire. Povzema misli utemeljitelja pozitivne psihologije Martina Seligmana (prav tam, str. 365), ki je navedel, da »optimistično pojasnjevanje« pomaga človeku pri vzdržljivosti in odpornosti, ker brani njegovo samopodobo. Dodaja (prav tam): »Če imate optimističen slog, to pomeni, da si pripišete zasluge za uspeh, pri porazih pa se ne krivite preveč.« Zato je Seligman (2009) predstavil različne tehnike za učenje optimističnega pogleda. Navedene izjave podpira tudi dobljena povezava treh trditev – duhovni razvoj ter poenostavljanje in pogled na napake, ki lahko postanejo podlaga nečesa novega.

T 3, ki predstavlja samostojno skupino, se nanaša na komunikacijo. T 3 navaja le posredno komunikacijo, zato smo dobili eno nižjih aritmetičnih sredin (M = 3,45) in komentarje, da je komunikacija tudi neposredna. Prav neposredna komunikacija in pretočnost informacij (Salvetti in Bertagni, 2020) sta tudi pomembni značilnosti agilne miselnosti ter agilnega VIZ; prav tako tudi pretok informacij v vse smeri (Bervar Kotolenko idr., 2020). Skupino poimenujemo ustrezna komunikacija.

Dobljene skupine, njihovo poimenovanje in povezovanje predstavlja slika 2 kot tri ključne značilnosti agilnega VIZ. S tem dopolnjujemo eno izmed opredelitev, da je agilna organizacija tista, ki se hitro prilagaja spremembam ter zna nanje takoj odgovoriti (Dolenc, 2018), in sicer z besedami, da je agilni VIZ tisti, ki skrbi za posameznika in njegovo delovanje v VIZ, je pozitivno naravnan ter uporablja ustrezno komunikacijo.
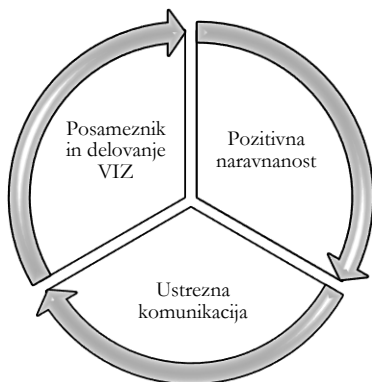
Slika 2: Ključne značilnosti agilnega VIZ

Sklepne ugotovitve

Marsikaj, kar so programerji zapisali v *Manifestu* (2001), na osnovi katerega se razvija agilna miselnost, se je posredno preneslo tudi v našo šolsko prakso; to pa so pokazali rezultati naše neeksperimentalne raziskave na osnovi vprašalnika med strokovnimi delavci različnih VIZ. Ker je bil vzorec priložnosten in neslučajnosten, domnevamo, da je zajel bolj »agilne« posameznike, in če naj bi agilnost delovala po principu snežne kepe (COMPETO, b. l.), kjer je važen posameznik, ki razširja svoje poglede in delovanje naprej, naj bi agilen strokovni delavec pomenil agilen kolektiv in agilen VIZ.

Savitha in Nair (2020) tudi navajata, da morajo VIZ postati agilni, če želijo izboljševati kakovost vzgojno-izobraževalnega procesa in služiti vsem uporabnikom, ker izboljšanje ni dogodek, ampak skupno potovanje brez realističnega zaključka.

Na osnovi raziskave smo oblikovali tri ključne, medsebojno povezane skupine ali kategorije trditev: posameznik in delovanje VIZ, pozitivna naravnanost in ustrezna komunikacija. Vsi pojmi se navezujejo na človeške vire in potrjujejo mnenje, da se največje ovire do spremembe ne nanašajo na spremembe tehnologije, ampak na spremembe, ki vključujejo ljudi (Appelbaum, St-Pierre in Glavas, 1998).

Summary

Agility as a phenomenon was constructed in 2001, at a summit of seventeen independent-minded practitioners at several programming methodologies who closed themselves within Snowbird, a town in Utah, the USA for a few days. They were looking for ways of thinking and acting against the rigid and bureaucratic way of thinking. They created the *Manifesto for Agile Software Development* (2001) (in the following *Manifesto*, 2001) in which they stressed 4 main values.

A different, agile way of thinking has spread quickly among entrepreneurs and is gradually moving into the pedagogical field as well (e.g., Savitha & Nair, 2020; Sušec, 2019).

Susan McIntosh (2016) believes that defining the term agile mindset is difficult. She adds that many agile practitioners use it without really being able to define it. Therefore, she proposes that the agile mindset includes the following themes: respect, collaboration, improvement and learning cycles, pride of ownership, focus on delivering values, and the ability to adopt change.

In order to research what the attitudes of educational professionals are about their EI, we decided to conduct a survey based on a questionnaire, which was a combination of closed and open-ended survey questions and a Likert attitude scale. Educators were asked to mark one of five squares, describing their opinion of each statement. Squares represent their agreement with each statement, from strongly agree to strongly disagree.

The questionnaire was filled out by 184 educators from different EIs (mainly kindergartens and primary schools, two respondents were also from secondary schools), with different levels of education, from different environments of EI and different regions in Slovenia.

The sample is convenience and nonrandom, as we reached the respondents indirectly, through the students of a pedagogical faculty, when they were on study practice. The students gave the educators willing to participate a questionnaire to be filled in during the spring months of 2022. The analysis based on descriptive statistics showed that the respondents had mainly positive attitudes about their EI or could not define themselves. The highest average (M) was obtained on a five-point attitude scale with answers ranging from strong agreement (grade 5) to strong disagreement (grade 1) for three statements, namely, that positive actions are encouraged (M = 4.51), that the main concern are children/students (M = 4.42) and that positive emotions are important (M = 4.41). However, they were undecided regarding the following two statements: that they simplify things and problems (M = 3.38) and that mistakes at work are not emphasized (M = 3.39). These results show that educators think that EIs have already roamed into positive views, influenced and spread by positive psychology, positive teaching, etc., but not yet into a completely agile mindset, which understands mistakes as constant learning and a lesson and is based on simplifying things and problems.

With the use of a multivariate cluster analysis, we created a dendrogram with three clusters, which we named: the individual and the operation of EI, positive mindset and adequate communication which we summarized from the answers to the presented attitudes of the sample of respondents about their EI. The resulting clusters could be highlighted as three key characteristics of an agile EI. With this in mind, we can completed one of the definitions that an agile institution is one that quickly adapts to changes and knows how to respond to them immediately (Dolenc, 2018). We add that an agile EI is one which takes care of the individuals and their performance within the EI, has a positive mindset and makes use of appropriate communication.

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Environmental Literacy of ISCED 2 Pupils in Poland

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Abstract/Izvleček

Environmental literacy comprises environmental knowledge, attitudes, sensitivity, and responsible environmental behaviour. This study focuses on the environmental literacy of ISCED 2 pupils in Poland. The survey analysed the relationship between environmental literacy and its significant determinants. The connection between environmental literacy and the gender, school grade and leisure time of the respondents was determined. More than three hundred respondents took part in the testing. A moderately positive relationship between the dimensions of environmental literacy was demonstrated. Analyses have also shown that environmental literacy is significantly determined by gender, school grade and leisure activities, especially outdoor activities.

Okoljska pismenost poljskih učencev na predmetni stopnji

Okoljska pismenost predstavlja obseg okoljskega znanja, stališč, občutljivosti in odgovornega okoljskega vedenja. Predstavljena študija se osredinja na okoljsko pismenost učencev na predmetni stopnji na Poljskem (angl. International Standard Classification of Education – ISCED 2). Raziskava je analizirala povezavo med okoljsko pismenostjo in njenimi pomembnimi dejavniki. Ugotovljena je bila povezava med okoljsko pismenostjo in spolom, šolsko stopnjo in prostim časom anketiranih. V testiranju je sodelovalo več kot tristo anketiranih. Pokazala se je zmerna pozitivna povezava med razsežnostmi okoljske pismenosti. Analize so tudi pokazale, da okoljsko pismenost pomembno določajo spol, razred šole in prostočasne dejavnosti, zlasti dejavnosti na prostem.

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Introduction

The concept of the construct of environmental literacy was formed over time in a close reciprocal relationship with the development of environmental education. In documents from the North American Association for Environmental Education, it is also characterized as the main goal of environmental education, covering its framework goals comprehensively (NAAEE, 2019). The applied research tool is based on the above definition of environmental literacy, although the Polish concept of environmental education does not explicitly work with this concept.

The best known research tools for environmental literacy include the 2 Major Environmental Values (2-MEV) scale (Johnson and Manoli, 2011) and the Middle School Environmental Literacy Survey (MSELS) (McBeth and Volk, 2010). The questionnaire in the present study is an analytical tool developed by the author based on these previous tools.

Testing the environmental literacy of ISCED level 2 pupils in Poland was part of a larger study aimed at determining the level of environmental literacy in the Czech Republic, Slovakia, Poland, Germany, and Austria.

Theoretical background

Environmental education

The field of environmental education itself was first defined and specified at the end of the 1960s and the start of the 1970s. Its goals were officially formulated in Tbilisi in 1977. Its main goal was based on the acquisition of a complex of knowledge and skills, continuous consolidation and development of the ability to think in context (Roth, 1992).

Based on a certain generalization and comparison of selected key paradigms, the development of environmental education can be summarized in three paradigmatic models. In the 1970s, the main interest among experts was environmental awareness, with an emphasis on knowledge of nature and environmental issues focused on nature. The second model, which is characterized in NAAEE documents, was formed mainly in the USA. It focuses on responsible environmental behaviour through conflict investigation skills: as well as nature, it also targets society.

The third model, or the Northern European approach, aims at society, and its objective is to motivate people towards analysis of and participation in the resolution of environmental conflicts. Action competences for resolving problems that reflect relevant qualitative research are considered indispensable (Činčera, 2013).

Research into Environmental Literacy

Environmental literacy is based mainly on the principles of environmental education, and as would be expected, this represents its fundamental goal (Roth, 1992). It is currently perceived as a concept encompassing all the framework goals of environmental education (NAAEE, 2019).

Many experts favour the concept based on documents from the North American Association for Environmental Education (NAAEE). In these, the construct of environmental literacy is stated as a key goal of environmental education, comprehensively covering its framework goals (NAAEE, 2019).

A number of researchers have been involved in environmental literacy testing abroad. However, research that takes a comprehensive approach to it is an exception on a global scale (e. g., McBeth and Volk, 2010; Nastoulas et al., 2017). When mapping and analysing environmental literacy, many studies focus mainly on the affective dimension (e.g., Bogner et al., 2015; Grúňová et al., 2018), or the cognitive (e. g., Gul and Yesilyurt, 2011), sometimes in combination with the affective (e. g., Ilhami et al., 2019). The conative dimension, however, is not given much attention, although some research has focused on creating models of responsible environmental behaviour (e. g., Heimlich and Ardoin, 2008), or identifying the variables that shape it (e. g., Osbaldiston and Schott, 2012). However, recently there has been an effort to focus studies on the analysis of responsible environmental behaviour (e. g., Osbaldiston and Schott, 2012; Whitburn et al., 2020).

The absence of comprehensive environmental literacy research with a large sample of respondents was among the key arguments for conducting nation-wide environmental literacy research with high school students in the US at ISCED level 2 (The National Environmental Literacy Project) (McBeth and Volk, 2010). To this end, the Middle School Environmental Literacy Survey (MSELS) analytical tool was developed. It comprises a scale whose ambition is to cover all dimensions of environmental literacy. The tool was successfully validated not only in the American context (McBeth and Volk, 2010), but also in the Greek (Nastoulas et al., 2017) and the Czech environments (Svobodová and Kroufek, 2018).

In the case of ISCED 2 pupils, research often specifically focuses on certain components of environmental literacy, the interrelationship between them and their interaction with other variables. Ilhami et al. (2019) consider the implementation of natural science teaching in the context of local natural environment and traditions to be an effective method for strengthening environmental literacy. Schumm and Bogner (2016) used a didactic test to determine knowledge and the relationship between knowledge and gender. They concluded that gender specifics should be taken into account when designing environmental education programmes, as each gender responds differently to different aspects, many of which are crucial for learning.

Bogner et al. (2015) and Grúňová et al. (2018) focused on the affective dimension of environmental literacy and the diagnosis of its relation to demographic variables (gender, age, school grade, etc.). The significant influence of age on pro-environmental attitudes has been demonstrated, for example, by Bogner et al. (2015), and the correlation was negative. Grúňová et al. (2018) did not confirm the influence of age or gender. Similarly, Nastoulas et al. (2017) did not note a relationship between attitudes and gender among Greek students. Negative relationships between students' attitudes and their school grade have also often been demonstrated (e. g., McBeth and Volk, 2010; Nastoulas et al., 2017). Leisure activities can also be considered fundamental predictors of environmental attitudes and sensitivities, in combination with gender or school grade. A positive relationship was found between these, for example, by Geng et al. (2015) and Pereira and Forster (2015).

Geng et al. (2015), Pereira and Forster (2015), and Whitburn et al. (2020) focused on the relationship between nature and the conative dimension, i.e., areas of responsible environmental behaviour. They came to the same conclusions about the positive impact of regular activities associated with spending time in the outdoors not only on attitudes, but also on responsible environmental behaviour. In their study, Whitburn et al. (2020) support the view that the feeling of close connection with nature positively influences an individual's approach to it and increases positive consequences regarding general nature protection and biodiversity.

Environmental education and literacy in Poland

In Poland, the development of environmental education was initially similar to that in the Czech Republic. Its concept was based on a paradigmatic framework, which corresponded to the understanding of the field in the 1970s, taken from KAB theory (knowledge-attitudes-behaviour). The focus was on knowledge about nature, and the core responsibility lay in the hands of biology teachers, who passed on knowledge and shaped attitudes (Ramsey and Rickson, 1976). Until the end of the 20th century, formal environmental education was implemented mainly in biology classes or in the form of extracurricular and leisure activities. Initially, special emphasis was placed on the acquisition of knowledge about environmental protection. The subsequent reform of the education system was based on the implementation of multi-faceted education focused on practical knowledge (Buchcic, 2002; Kobierska et al., 2007).

As part of official environmental education, an interdisciplinary subject on nature was included in the basic curriculum, and new methods of teaching about the environment and ecology were applied. Environmental education is implemented either through integrated topics on the protection of nature or in the form of separate model programmes. The main goal of environmental education is to develop students' personal responsibility for the quality of the environment. Teaching is aimed at resolving environmental problems at the local and regional level. However, some studies point to the ambiguity and unsystematic nature of legal provisions and of the implementation of environmental education. Overly general recommendations, for example, for the selection of appropriate educational programmes, can result in significant inconsistencies in pupils' knowledge and skills across different schools in and regions of Poland (Stoczkowska, 2002).

Only a few researchers study pupils' pro-environmental attitudes. Their approaches are often inconsistent, especially with regard to the definition of the concept and methodology (Burger, 2005). Research conducted in the 1990s focused only on environmental knowledge and awareness of environmental threats. It revealed considerable inconsistency in knowledge (Domka, 2001). At the beginning of the 21st century, the emphasis is on an active approach to environmental issues, and the importance of pupils' views and attitudes is emphasised (Potyrała et al., 2004). The pro-environmental attitudes of Polish pupils were analysed by Kobierska et al. (2007), focusing on knowledge about the environment and activities for the benefit of nature, as defined in the environmental education curriculum.

Pupils were shown to have quite good knowledge about anthropogenic environmental issues, but less awareness of nature issues. A positive connection with spending time in the natural environment was recorded.

Aim and research questions

The Research Ethics Committee of Faculty of Education, Charles University found that the study carried out within the project Environmental Literacy of Second Grade's Pupils at Primary School in the Czech Republic, Slovakia, Poland and Germany met the requirements for ethical research practices.

The aims of this part of the research were to analyse the environmental literacy of pupils at ISCED level 2 in Poland and to identify the relationship between literacy and selected variables through an analytical tool developed by the author.

For the purposes of the research and the fulfilment of its goals, the following research questions were established:

1. What is the connection between the cognitive, affective and conative dimensions of the environmental literacy of ISCED level 2 pupils in Poland?
2. How close is the relationship between the variables (gender, school grade, and leisure activities) and the individual dimensions of the environmental literacy of ISCED level 2 pupils in Poland?

The following hypotheses were derived and formulated from the research questions, inspired by the findings from studying analogous research:

H1: Girls will demonstrably achieve higher values of cognitive, affective and conative dimensions of environmental literacy than boys.

H2: The values of environmental knowledge will increase in higher ISCED level 2 school grades.

H3: The values of the affective and conative dimensions of environmental literacy will decrease in higher ISCED level 2 school grades.

H4: Leisure activities demonstrably predict the level of environmental literacy of ISCED level 2 pupils.

Methodology

Research tool

The applied analytical tool, a quantitative questionnaire, is based on the standard instruments MSELS and 2-MEV, and its construction covers all dimensions of environmental literacy in accordance with the current definition by NAAEE (2019). The tool was piloted in the Czech environment (Svobodová and Chvál, 2019) and consists of five parts. In part A. Demographic data, the pupil's age, school grade, gender and leisure activities are ascertained. Part B., Knowledge about nature (Knowledge scale), is a didactic test, a modified version of the MSELS tool scale (16 items). Part C., What do you think about nature and the environment? (Attitudes scale), targets environmental attitudes and consists of the 2-MEV tool (16 items). The scale was still treated as one-dimensional; the individual factors Preservation and Utilization were not evaluated separately. An opposite concept of factors was ensured by the opposite scoring of the answers. Part D., How do you feel about nature and the environment? (Sensitivity scale), was taken from the MSELS tool (9 items). The scale focuses on the feelings that respondents experience towards nature, and on their motivation for and interest in being in the natural environment. Part E., What you do for nature and the environment (Behaviour scale), consisting of 9 items and developed by the author, represents a scale focused on responsible environmental behaviour.

For the Knowledge scale, respondents always chose 1 correct answer from 4 options. The correct answer was assigned a value of 1. For the other scales, respondents agreed with an assertion on a five-point Likert scale. Responses were scored from 5 (positive response) to 1 (negative response). Some items were formulated in reverse; for the purposes of analysis, their polarity was reversed. Items for leisure activities (outdoor activities, ICT, hobbies and sports) were evaluated in a similar way from 5 (very often) to 1 (never).

The instrument was translated into Polish by a native speaker and a Polish-speaking academic member of staff at the Department of Psychology of the Pomeranian Academy in Słupsk and was checked by several Polish experts to highlight the cultural aspects of the Polish environment (see Appendix). The distribution of questionnaires in paper form took place to individual schools either in person or through an instructed contact person. First, the informed consent of the parents of the pupils involved was obtained.

The instructions to students were provided by the author in person or by a teacher familiar with the procedure, requirements and goals of the research. Informed consent for their participation in the research was obtained from the pupils' legal representatives. The administration of the questionnaire took about 30 minutes and was most often carried out during science lessons. At the beginning, the pupils were informed about the aims of the research, they were instructed how to fill in the questionnaire and were told that they were answering anonymously.

Data processing
The reliability of the subscales of the instrument was determined by calculating the internal consistency with Cronbach's coefficient α, including their item analysis. A difficulty index, ULI sensitivity coefficient and distractor analysis were set for the Knowledge scale. The significance of the relationship between the individual dimensions of environmental literacy, the subscales of the tool, was analysed using correlation analysis. In the case of gender, a two-sample t-test was used for independent sampling of groups, and correlation analysis was used for school grade and leisure activities. For knowledge, ANOVA was applied to compare the results between school grades, with knowledge representing the dependent variable and school grade the factor variable over four groups (6th - 9th grades of lower secondary school) across schools. Leisure activities were subjected to multiple linear regressions. Knowledge, attitudes, sensitivity, and behaviour figure in the analyses as dependent variables, while leisure activities (outdoor activities, ICT, hobbies and sport), gender and school grade are in the position of independent variables (AERA, APA & NCME, 2014).

Data collection
The questionnaires were distributed in Poland in the spring of 2019. The survey involved 371 respondents, 184 girls and 187 boys, from 4 lower secondary schools (two in Słupsk and two in Poznań). Information about the participants' school grades is shown in Table 1.

Table 1: Overview of the representation of respondents (*n* = 371) in the 6th to 9th grades of lower secondary school

Grade	Number of respondents	Percentage from the grade (%)
6.	90	24%
7.	123	33%
8.	87	24%
9.	71	19%

Results

The reliability of the instrument scales determined by calculating Cronbach's α coefficient showed sufficient values (Tavakol and Dennick, 2011). Item analyses identified 14 and 49 as suspicious items (see below), the removal of which increased the reliability of the affected Knowledge and Behaviour scales. The resulting reliability values for the instrument scales, including the original values and an overview of deleted items, are shown in Table 2.

Table 2: Overview of the calculated reliability of the partial scales of the author's instrument based on item analysis, including original values (Cronbach's α) found by the authors of the initial tools MSELS and 2-MEV

Tool scales	Reliability of Cronbach´s α	Omitted items	Reliability without omitted items	Original reliability of Cronbach´s α
Knowledge	.70	č. 14	.72	.79*
Attitudes	.73	-	.73	.83**
Sensitivity	.77	-	.77	.78*
Behaviour	.75	č. 49	.77	-

*MSELS - Middle School Environmental Literacy Survey (McBeth and Volk, 2010), **2-MEV - 2 Major Environmental Values (Johnson and Manoli, 2011)

Knowledge Scale

14.   The original source of energy for almost all living things is:
   a)   the soil
   b)   water
   c)   the sun
   d)   plants

14.   Pierwotnym źródłem energii dla niemal wszystkich istot żywych jest:
   a) gleba
   b) woda
   c) słońce
   d) rośliny

Behaviour Scale

49.   I am not interested in air pollution problems.

a) strongly agree   b) slightly agree   c) neutral   d) slightly disagree   e) strongly disagree

49.   Nie interesują mnie problemy związane z zanieczyszczeniem powietrza.

a) zdecydowanie się zgadzam b) raczej się zgadzam c) nie mam zdania d) raczej się nie zgadzam e) zdecydowanie się nie zgadzam

The difficulty index of the Knowledge scale, i.e., the didactic text, was a very suitable P= 58. The difficulty index, ULI sensitivity coefficient and analysis of distractors of individual items agreed with the item analysis on problematic item No. 14 (see above), which showed structural deficiencies. Its difficulty index (P= 34) and sensitivity coefficient (d= .04) were low. The results of the analysis of distractors of this item also pointed to other weaknesses, which are presented in Table 3. The analysis of distractors shows that the respondents more often chose variant B as the correct answer, although these were less successful respondents when looking at the overall test result. The attractiveness of the correct answer (C) is significantly lower than that of one of the distractors (B); the discrimination of the given distractor attains a negative value. The cause of the problem could be related, for example, to an incorrect interpretation of the concept of energy in relation to water and the Sun as its source.

Table 3: Analysis of distractors of item No. 14 from the *Knowledge* scale

Possible answer	Attractivity (%)	Discriminance (1/5) (%)
A	4.0	-8.1
B**	55.0	-14.9
C*	33.7	25.7
D	6.7	-1.4

*C - correct answer, **problematic distractor

The correlation between attitudes, sensitivity, and behaviour, i.e., the affective and conative dimensions of environmental literacy, was identified by correlation analysis as significant, positive and moderately strong. The correlation coefficient ϱ is in the interval $\langle .4; .6 \rangle$. For knowledge, a more fundamental connection with attitudes was noted ($\varrho = .27$). The results of the correlation analysis are presented in Table 4.

Table 4: Overview of Spearman's correlations (values of correlation coefficients ϱ) between sub-scales of the author's instrument, including correlations of individual scales with the instrument

Scales/tool	TOOL	Knowledge	Attitudes	Sensitivity	Behaviour
TOOL		.32	.86	.64	.83
Knowledge	.32		.27	-.04	.06
Attitudes	.86	.27		.37	.60
Sensitivity	.64	-.04	.37		.60
Behaviour	.83	.06	.60	.60	

Note: Values in bold are significant ($p < .01$)

The descriptive characteristics of the sub-scales of the instrument, which represent the dimensions of environmental literacy, are presented in Table 5.

Table 5: Descriptive statistics (overview of basic results of sub-scales of the instrument)

Tool scales	Descriptive statistics of variables						
	number of items	n valid	min.	average	median	max.	SD
Knowledge	16	371	2,00	9,34	9,00	16,00	3,16
Attitudes	16	370	1,69	3,38	3,38	4,81	0,58
Sensitivity	9	370	1,56	3,15	3,11	5,00	0,69
Behaviour	9	368	1,00	3,46	3,44	5,00	0,67

Relationship between environmental literacy and gender

In the case of gender, a significant link to knowledge ($p < .05$), attitudes ($p < .001$) and behaviour ($p < .001$) was identified. Girls always achieved slightly higher values, as Graph 1 illustrates for environmental knowledge.
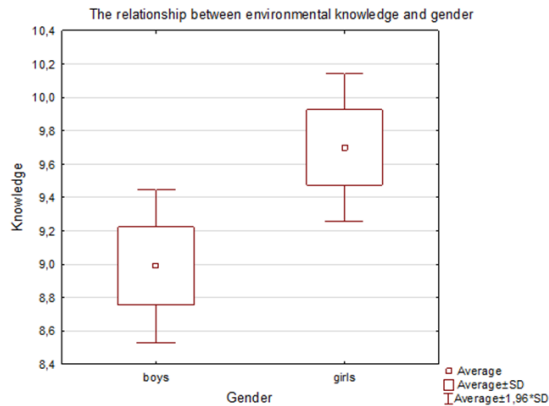
Graph 1: Relationship between environmental knowledge (author's instrument Knowledge scale) and gender of respondents based on the results of a two-sample t-test

Connection between environmental literacy and school grade or age

ANOVA demonstrated a significant association between knowledge and school grade (see Graph 2, $p < .001$). The results point to the fact that one of the school grades differs from the others. Tukey's HSD test showed a significant difference between the 9th grade and other grades ($p < .001$). Graph 2 shows the direct relationship between the level of knowledge and the school grade.
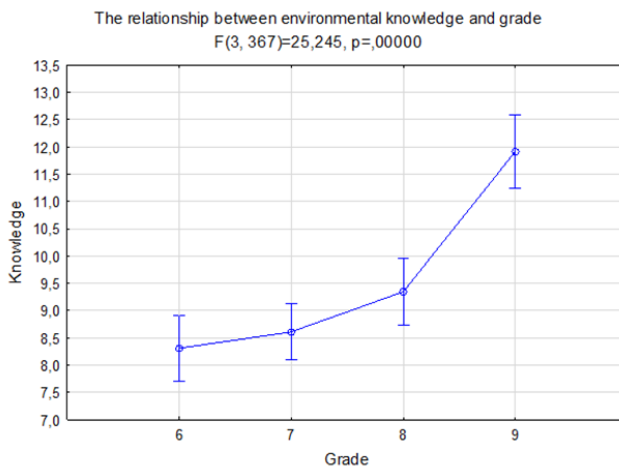
Graph 2: Relationship between environmental knowledge (author's instrument Knowledge scale) and the school grade of school-aged respondents based on ANOVA and Tukey's HSD test

However, ANOVA did not provide meaningful results for attitudes, sensitivity or behaviour, and correlation analysis was again used. Spearman's correlation coefficient proved to be statistically significant only in the case of knowledge (ϱ=0.37). The values for the other instrument scales were not significant (p> .05).

The connection between environmental literacy and leisure activities

Testing of the relationship between leisure activities (outdoor activities, ICT, hobbies, sports) and environmental literacy was subjected to correlation analysis. A positive correlation was found between attitudes, sensitivity, and behaviour with leisure activities, except for ICT, although it was mostly a weak correlation. Only outdoor activities correlated more strongly with sensitivity and behaviour. In contrast, spending time with ICT proved to be a negative factor; the correlation coefficient reached negative values, which can be read in Table 6.

Table 6: Overview of mutual Spearman's correlations (correlation coefficient ϱ) between the partial scales of the author's instrument and the individual leisure activities of respondents

Tool scales	Leisure activities			
	outdoor activities	ICT	hobbies	sport
Knowledge	-.10	-.04	.07	-.12
Attitudes	.14	-.25	.20	.05
Sensitivity	.36	-.17	.24	.24
Behaviour	.30	-.21	.14	.06

Note: Values in bold are significant (p< .01)

A weak connection between environmental literacy and leisure activities is also evidenced by the results of the regression analysis, i.e., the values of the regression coefficient and the coefficient of determination R^2 (see Table 7). Leisure activities predict knowledge by 5%, attitudes by 10%, sensitivity by 17% and behaviour by 12%. Outdoor activity, unlike ICT, has a positive effect and is the strongest of the leisure activities.

Table 7: Results of multiple regression analysis between the sub-scales of the author's instrument and the individual leisure activities of respondents

Tool scales	R² Coefficient of determination	b - Regression coefficient			
		outdoor activities	ICT	hobbies	sport
Knowledge	.05	-.108*	-.054	.163**	-.160**
Attitudes	.10	.080	-.225***	.199***	-.045
Sensitivity	.17	.285***	-.110*	.130*	.122*
Behaviour	.12	.255***	-.162**	.102	-.042

*p < .05; ** p < .01; *** p < .001

Discussion

Environmental literacy research was carried out in Poland on a small sample of respondents (n= 371) and a small number of schools (4), so the results cannot be generalized for the whole target group of ISCED level 2 pupils in Poland because of the unrepresentativeness of the sample.

The relationship between environmental literacy dimensions was identified as significant. In particular, the affective and conative dimensions correlated moderately closely and positively ⟨.4; .6⟩. In the case of the cognitive dimension, there was a connection exclusively between knowledge and attitudes. Therefore, individuals with pro-environmental attitudes and high levels of environmental sensitivity can be expected to act in an environmentally responsible manner. The connections between the knowledge and attitudes of Polish pupils were examined in more detail by Kobierska et al. (2007). Several research studies address the issue of the relationship between the individual dimensions of environmental literacy. A significant relationship between the affective and conative dimensions was identified, for example, by Whitburn et al. (2020), while a connection with the cognitive dimension was not demonstrated. Analogous conclusions are provided by many other studies (Svobodová, 2020).

From the tested variables (gender, school grade and leisure activities), a significant connection of gender with knowledge, attitudes and behaviour was found, while for school grade, it was only with knowledge. In the case of leisure activities, there was a significant relationship with all scales of the instrument; however, the established link can be assessed as rather weak.

Hypothesis H1 (Girls will demonstrably achieve higher values of cognitive, affective and conative dimensions of environmental literacy than boys.) can be considered to have been proven, because girls showed higher values in knowledge, attitudes and behaviour. Schumm and Bogner (2016), for example, pointed to the fundamental relationship between gender and knowledge. They consider the gender aspect to be one of the decisive factors for learning and recommend that it be taken into account when creating environmental education programmes. Identical findings with respect to the statistically significant relationship between the gender variable and the affective dimension of environmental literacy were recorded, for example, by Kroufek et al. (2015). In contrast, Nastoulas et al. (2017) and Grúňová et al. (2018) did not confirm the effect of gender.

Hypothesis H2 (The values of environmental knowledge will increase in higher ISCED level 2 school grades.) was also confirmed, because the respondents' knowledge grew in direct proportion to their grade. Domka (2001), for example, drew attention to the non-uniform knowledge of Polish pupils. Evidence of a direct relationship between grade and knowledge is provided by other studies (e.g., McBeth and Volk, 2010). On the other hand, hypothesis H3 (The values of the affective and conative dimensions of environmental literacy will decrease in higher ISCED level 2 school grades.) cannot be considered to have been proven, because the connection between school grade and attitudes, sensitivity or behaviour did not prove significant. Findings about the negative correlation of school grade with attitudes, sensitivity or behaviour were reached, for example, by McBeth and Volk (2010) among American students, and Nastoulas et al. (2017) among Greek students. The same conclusions were reached by Liefländer and Bogner (2014) and Bogner et al. (2015), who applied the 2-MEV tool in their research.

Regression analysis confirmed hypothesis H4 (Leisure activities demonstrably predict the level of environmental literacy of ISCED level 2 pupils.). Although the identified relationship can be considered statistically significant, it represents a weak dependence. Nevertheless, to some extent leisure activities can be considered predictors of environmental knowledge, attitudes, sensitivity and responsible environmental behaviour, and outdoor activities can be considered as a positive determinant, in contrast to the negative factor of ICT. In their research in Poland, Kobierska et al. (2007) concluded that there was a positive connection between spending time regularly in the outdoors and environmental attitudes.

Many other research papers provide evidence on the positive and strong relationship between activities associated with outdoor activity and environmental literacy or rather attitudes, sensitivities and responsible environmental behaviour (e.g., Geng et al., 2015; Pereira and Forster, 2015; Činčera et al., 2020). The positive impact of the Ecoschool program, which is preferred by outdoor teaching, on pupils' environmental attitudes is reported, for example, by Potočnik et al. (2010). Similarly, Čagran et al. (2011) talk about the significant positive impact of project and experiential teaching.

Conclusion

The findings of the research confirm the relatively important relationships between environmental attitudes, sensitivity, and behaviour among Polish pupils. The results showed that attitudes and sensitivity can be considered essential determinants of responsible environmental behaviour. Similarly, outdoor activity, which shapes these attitudes and sensitivities, proved to be an important factor. The difference in values between girls and boys indicates the further significant influence of gender. As well as considering the gender aspect, it also seems crucial to emphasise the development of environmental sensitivity and attitudes, which are relatively strongly predicted by outdoor activities. The outdoor form of education appears to be an effective way of implementing environmental education. Of all the organised forms of teaching, it would be appropriate to regularly include field learning, inquiry-based science education, excursions, or various environmentally oriented projects. Experiential learning also offers considerable potential in this sense (Parry and Allison, 2019). Another important challenge is to identify the determinants and predictors of environmental literacy levels. Therefore, in further research, it would be appropriate to broaden the spectrum of variables and test their relation to environmental literacy, especially to environmental sensitivity and attitudes. However, given the low number of respondents and the non-representative nature of the sample, these research results cannot be unambiguously generalised for the entire target group of Polish pupils at ISCED level 2.

Limits of the study

The limitation of this research is primarily the small research sample and the method of respondent selection, as the respondents were not randomly selected. The respondents came from only 4 schools in two Polish cities, and the results cannot therefore be generalized to the whole target group of lower-secondary pupils in Poland.

Declaration of conflict of interest

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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THE IMPACT OF THE TEACHER EDUCATION STUDY PROGRAM ON THE DEVELOPMENT OF TPACK

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Abstract/Izvleček This study compares students' TPACK at the beginning and at the end of their college education according to their involvement and the number of computer science courses. Research was conducted at the Faculty of Education in Osijek, Croatia, with the same generation of students, in 2015 (N=71) and 2020 (N=43). The results showed a statistically significant difference for Technological, Pedagogical and Content Knowledge, for all students in the sample and for students with additional computer science courses. In the case of overall TPACK, there is no difference for the overall sample of students but for students with additional computer science courses, the difference is significant.

Vpliv študijskega programa izobraževanja učiteljev na razvoj modela TPACK

V članku analiziramo komunikacijske sposobnosti vzgojiteljev/vzgojiteljic med starševskimi sestanki v vrtcih. V skladu z metodologijo kvalitativnega raziskovanja smo opazovali in zabeležili izbrane elemente komunikacije zaposlenih med 12 starševskimi sestanki v različnih vrtcih. Rezultati so pokazali, da so bili opazovani starševski sestanki dobro pripravljeni, strukturirani, primerni in interaktivni, izvedeni z ustreznim besediščem in elementi učinkovite govorne komunikacije. Največja pomanjkljivost komunikacije zaposlenih je bila nerazvita tehnika aktivnega poslušanja. Prav tako so bile očitne razlike v individualnih komunikacijskih spretnostih zaposlenih. Rezultati te raziskave lahko služijo kot orodje za razmišljanje o pedagoški praksi pri zgodnjem učenju in poučevanju.

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Introduction

The Croatian Qualifications Framework (CQF, Ministry of Science and Education, 2021) is an instrument for regulating the qualifications system in the Republic of Croatia. The National Development Strategy 2030 of the Republic of Croatia (Croatian parliament, 2021) emphasizes the importance of acquiring and developing basic and vocational competences through raising the digital competence of professionals from non-information professions, as well as the digital transformation and informationalisation of the education system. In the Strategic framework for digital maturation of schools and the school system in the Republic of Croatia and in Education Action Plan 2021-2027, teachers' self-confidence in integrating ICT into the teaching process is important, but during their initial education, teachers are not prepared to use ICT in teaching which emphasizes the importance of initial teacher education in the areas of applied ICT in teaching. In addition to strategic documents, scientific research also confirms the importance of initial teacher education in the area of ICT application in teaching (European Commission, 2020). The use of ICT in teaching enables the use of new teaching methods, and easier access to information, while offering diversity of knowledge transfer and storage (Ministry of Science and Education, 2020). The Strategy for Education, Science and Technology (Ministry of Science and Education, 2014) emphasizes the importance of investing in people (teachers) who will be responsible for the integration of technology in education. In the Republic of Croatia, the goal is to integrate technology tailored to students, teachers and other school employees in all primary and secondary schools by 2030, with the purpose of developing learning, teaching and business, taking into account the needs of society, community and other stakeholders (Ministry of Science and Education, 2020). Research (Ministry of Science and Education, 2020) has shown that during their initial education, teachers are not being prepared to use ICT in teaching. The importance of professional development in the field of ICT application to learning and teaching should be emphasized through the development of a methodology for the use of ICT in teaching, a guide for applying ICT in individual subjects and individualized approaches. This also includes the development of university educational programs in the field of ICT application in teaching (Ministry of Science and Education, 2020).

Literature review

The complexity of the teaching profession is constantly increasing because of the rapid expansion of new scientific knowledge, global mobility, technical development and technology, new social relations and the organization of life and work (Đuranović, 2005). To successfully assume all these new roles, the teacher must be open, ready for change and motivated for lifelong learning and continuous professional development (Razdevšek Pučko, 2005). Teachers need to possess pedagogical and technological competences to be able to teach students and strengthen them in the field of digital competences. The integration of ICT into teaching and across the entire education system is a complex area (Ministry of Science and Education, 2020). Eurydice (2003) identifies teaching using modern ICT technology as an important area of new teacher competence that should be an integrative part of teachers' pedagogical competences and become a necessary component of lifelong learning content, as well as an integrative part of modern teacher education programs (Brust Nemet, 2015). Future teachers should be trained to work with information, technology and knowledge; work with people - students, associates and other partners in education; and to work in and with society, at local, regional, national and European levels, as well as at the global level ("Education and Training", 2010). The shortcomings include a digital divide that means unequal conditions in terms of digital technology in different schools (Ministry of Science and Education, 2020).

When differences in TPACK in relation to gender are observed, research shows that either there are no differences related to gender (Schmid et. al., 2021), or that the differences are inor and inconsistent throughout the components of TPACK (Ergen et. al, 2019; Scherer, Siddiq, and Teo, 2015).

The development of TPACK among pre-service teachers is a complex process with important factors such as previous experience with technology, subject knowledge, and beliefs about the use of technology (Mudzimiri, 2012). The inclusion of ICT in courses during study programs, as well as teaching about its integration, can empower students to work with digital technology (Choe and Lee 2015; Yigit, 2014). The development of TPACK can also be influenced by the education system as a contextual factor (Dobi Barišić et. al, 2019).

Pre-service teachers should be better enabled to develop competence in technology integration planning (Mudzimiri, 2012). Research conducted by Baran et al. (2019) pointed out the positive connection between the teacher education program itself and the development of TPACK.

Significant differences in the level of TPACK components were found in pre-service teachers attending STEM courses compared to those attending social science courses (TK and TCK component) (Schmid et. al, 2021). Similar results were obtained in a study by Altun and Akyildizs (2017), which showed that pre-service teachers preparing to teach science have obtained a higher level of TPACK than pre-service teachers preparing to teach social sciences and Turkish language. Moreover, a difference (a positive effect) was observed in students who took the designed lecture and those who took ordinary ICT literacy lectures (TK, TCK, TPK and TPACK) (Choe and Lee, 2015). In contrast, there are studies that have found no statistically significant differences in TPACK components among teachers in the areas of mathematics, science, and literacy (Tokmak et al., 2013).

TPACK framework

One of the frameworks that describes successful integration of digital technology in teaching is TPACK, developed by Koehler and Mishra in 2009 (Koehler and Mishra, 2009). In the TPACK framework (Figure 1), there are three main components of teachers' knowledge: content, pedagogy, and technology. Equally important to the model are the interactions between and among these bodies of knowledge, represented as PCK (pedagogical content knowledge), TCK (technological content knowledge), TPK (technological pedagogical knowledge), and TPACK (technological, pedagogical, content knowledge). Back in 2009, Koehler and Mishra stated that integrating new technologies into teaching posed a major challenge for teachers. Therefore, they developed the theoretical framework of Technological Pedagogical Content Knowledge (TPACK) as a framework for the successful integration of digital technology in teaching.

Figure 1: TPACK framework (Reproduced with the permission of the publisher, © 2012 by tpack.org)

TPACK is a new form of knowledge that derives from basic pedagogical, technological and content knowledge. Although this knowledge forms the foundation of TPACK, it differs for each of them. TPACK means effective teaching with the help of technology, and in order to make this possible, it is necessary to have knowledge from all three areas separately, and more importantly, to understand the interactions between these areas (Koehler and Mishra, 2009).

The main goal of this theoretical framework is to connect the knowledge of teachers from the basic domains of the framework with their actions and the effects of these procedures (Koehler and Mishra, 2009).Naslov naslov.

Research aims and hypotheses

The aim of the research is to determine whether there is a difference in the development of TPACK in relation to the number of computer science courses that students attend during their studies.

At the Faculty of Education, after the first semester, students choose between three elective modules, which differ from each other in 20% of courses that are specific to the selected module (Table 1). All students, regardless of the chosen module, take six computer science courses, four of which relate to general computer knowledge, while two contain elements of the application of ICT in teaching. Students who choose module B take an additional nine computer science courses, six of which relate to general computer knowledge, while three contain elements of the application of ICT in teaching.

Considering the purpose of module B (Computer Science orientation), we specifically studied whether the number and nature of computer science courses affects the development of TPACK.

Based on the reviewed literature, this study aims to address the following hypotheses:

H1: The involvement of computer science courses in the teacher education study program influences the development of students' TPACK.

H2: The number of computer science courses in the teacher education study program influences the development of students' TPACK.

Table 1: Elective modules at the Faculty of Education, University of Osijek, Croatia

Module A
Developmental orientation - selected courses from pedagogy, psychology and methodology broadly enable students to understand specific issues in education and child development.
Module B
Computer science orientation - more thoroughly trains the student to use information and communication technologies in the education of children in the first four grades of primary school.
Module C
Foreign language orientation – additionally trains students for teaching younger school-age children foreign language.

Methodology

The study is longitudinal. The data were collected using the survey method combining demographic questions and questions from SPTKTT (Schmidt et al., 2009). SPTKTT is a tool for self-assessment of knowledge about the application of technology in teaching and was created for preservice teachers (preschool and lower grades of primary school) with the aim of examining their TPACK development.

It consists of 47 items grouped by components of the TPACK theoretical framework, with answers located on a 5-point semantic scale (Likert type). The questionnaire was translated into Croatian by the double translation method (Dobi Barišić, 2018). The questionnaire was conducted via the Survey of Preservice Teachers' Knowledge of Teaching and Technology online, in the first phase via the learning management system (based on Moodle), and in the second phase by using Google Forms. The study was carried out at the Faculty of Education, Josip Juraj Strossmayer University of Osijek, Republic of Croatia. The sample consists of students who enrolled in the Integrated undergraduate and graduate university teacher study in the academic year 2015/16 (78 students). Research was conducted in two phases: first, when respondents enrolled in the initial study year in the academic year 2015/2016 (N1=71), and the second time, after completing all courses (or after graduating) in the academic year 2020/2021 (N2=42).

The implementation of the online Questionnaire was followed by quantitative data analysis using the statistical program SPSS 19.0. Since the data were collected on a 5-point semantic scale (Likert type), non-parametric statistics was performed; more precisely, the Wilcoxon test was used.

Results and interpretation

Demographic data--gender, module and student status--(only for 2020), are shown in Table 2.

Table 2: Demographic data (gender, module and student status)

Gender				
	2015		2020	
	N	%	N	%
Female	67	94.4%	41	97.6%
Male	4	5.6%	1	2.4%
Student status				
	2015		2020	
	N	%	N	%
All courses completed	-	-	11	26.2%
Graduated	-	-	31	73.8%
Module				
	2015		2020	
	N	%	N	%
Module B	15	21.1%	10	23.8%
Module A & Module C	56	78.9%	32	76.2%

In the second table, the number of male students is underrepresented in the study, which is a common ratio in teacher education research. Data on the status of the student (graduated or passed all exams) and the module they attended are also presented.

Table 3 shows the descriptive statistics for a sample of respondents who attend Module A and Module C, and for respondents who attended Module B. Descriptive statistics is shown for each sub-scale of the SPTKTT questionnaire, using data from 2015 and 2020, and includes the arithmetic mean, standard deviation, median and mean rank.

Table 3: Descriptive statistics and results of Wilcoxon test in relation to the research phase

Sub-scale	phase	N	Q1	Median	Q3	Mean Rank	Wilcoxon test	
							z	p
TK	2015	71	3.14	3.57	4.00	46.78	-3.41	<0.05
	2020	42	3.71	4.07	4.61	74.27		
CK	2015	71	3.00	3.33	3.67	43.11	-4.71	<0.05
	2020	42	3.73	4.00	4.42	80.49		
PK	2015	71	3.29	3.86	4.14	45.08	-3.82	<0.05
	2020	42	4.00	4.43	4.75	77.14		
PCK	2015	71	3.00	3.50	4.00	43.54	-4.25	<0.05
	2020	42	4.00	4.25	5.00	79.76		
TCK	2015	71	3.00	3.50	4.00	44.55	-4.10	<0.05
	2020	42	4.00	4.33	5.00	78.05		
TPK	2015	71	3.20	3.80	4.00	45.92	-3.93	<0.05
	2020	42	3.80	4.40	5.00	75.73		
TPACK	2015	71	3.13	3.50	4.00	52.62	-1.59	>0.05
	2020	42	3.46	3.75	3.91	64.40		

The TPACK of all students, regardless of the selected module, after completing all courses, or after graduating, (Mdn=3.75, Q1=3.46, Q3=3.91) is higher than the TPACK at the beginning of their college education (Mdn=3.50, Q1=3.13, Q3=4.00) (Table 3). A Wilcoxon test indicated that the difference was not statistically significant, z = -1.59, p>0.05 (Table 3).

The results of the Wilcoxon test for all students (regardless of the module selected), in relation to the beginning and end of their studies, suggest the rejection of hypothesis H1: i.e., the involvement of computer science courses in the teacher education study program does not influence the development of their TPACK.

Table 4: Descriptive statistics and results of Mann-Whitney U-test in relation to selected module

Sub-scale	phase	N	Q1	Median	Q3	Mean Rank	Wilcoxon test	
							z	p
TK	Module B	10	3.96	4.14	4.64	24.40	-0.56	>0.5
	Module A&C	32	3.46	4.07	4.68	20.59		
CK	Module B	10	3.75	3.88	4.27	21.05	-0.41	>0.5
	Module A&C	32	3.58	4.08	4.42	21.64		
PK	Module B	10	4.25	4.50	4.89	23.55	-0.36	>0.5
	Module A&C	32	4.00	4.43	4.71	20.86		
PCK	Module B	10	4.00	4.38	5.00	22.75	-0.96	>0.5
	Module A&C	32	4.00	4.25	5.00	21.11		
TCK	Module B	10	4.00	5.00	5.00	28.25	-1.15	>0.5
	Module A&C	32	3.75	4.00	4.92	19.39		
TPK	Module B	10	3.80	4.20	4.60	32.00	-1.68	>0.5
	Module A&C	32	3.80	4.20	4.60	18.22		
TPACK	Module B	10	4.50	4.94	5.00	32.30	-2.32	<0.5
	Module A&C	32	3.91	4.25	4.50	18.13		

The TPACK of students attending Module B (Mdn=4.94, Q1=4.50, Q3=5.00) is higher than those of students from Module A and Module C (Mdn=4.25, Q1=3.91, Q3=4.50) (Table 4). A Wilcoxon test indicated that this difference was statistically significant, z= -2.32, p<0.5.

The results of the Mann-Whitney U-test in relation to Module after completing all courses, or after graduating, suggest the acceptance of hypothesis H2: i. e. the number of computer science courses in the teacher education study program does influence the development of their TPACK.

Discussion

Mailizar, Hidayat, and Artika (2021) found among high school math teachers that the demographic characteristics of teachers, such as gender and level of education, determined their TPACK. Gómez-Trigueros, and De Aldecoa (2021) found that female teachers had very poor self-perceptions of their own digital competence.

According to the research available to the authors, most other studies report no differences related to gender (Schmid et al., 2021) or minor differences (Ergen et. al, 2019; Scherer, Sissiq and Teo, 2015), while in this study there are insufficient male students to determine a difference by gender, but a difference was determined according to students' selected study module.

The results of this study showed that the involvement of computer science courses, regardless of number and content, positively affected the development of all types of knowledge (TK, Pk, CK, TPK, TCK, PCK) except TPACK. Nevertheless, the development of TPACK is positively influenced by the number of computer science courses that students take. These results confirm those from research among Chinese students at teacher training colleges, showing that students do not distinguish between technological-pedagogical knowledge and knowledge of technological content (Qiu et al., 2022).

If we look at the research conducted by Voithofer and Nelson (2021) who found that faculty members were increasingly integrating technology into curricula and teaching but that the level of TPACK adoption was quite low and that TPACK concepts differed greatly, we may wonder whether technology integration into other courses (that are not computer science oriented) is sufficient for the development of TPACK, or whether it is still necessary to offer specific courses to teach students how to properly integrate technology into teaching. In doing so, we should always take into account that the influence of will and desire of the individual teacher is another important factor to be taken into account, which Dikmen and Demirer (2022) emphasize in their research. Dikmen and Demirer (2022) believe that those teachers who feel digitally more competent will more often integrate technology into teaching. In addition to teacher competence, global factors such as the COVID-19 pandemic, which has led to more frequent online teaching, impose on teachers the strengthening of digital competences. At what level TPACK developed during the pandemic and under what influence (self-initiative or initiatives of superiors) still needs investigation.

This study has shown that the teaching content of Module B (computer science oriented) has a greater positive impact on TPACK, which is in line with results from Lachner et al. (2021), which highlighted the need for continuous student support for the development of professional knowledge and motivation related to the inclusion of technology in teaching.

The advantages of this longitudinal study are the comparison of the level of pedagogical and technological knowledge of students, future teachers at the beginning and end of their studies and determining the connection between higher knowledge of students and the study program they attend. The disadvantages of this research are the small number of respondents and the self-assessment of students, where there may be a potential for giving socially desirable answers.

Conclusion

Technological Pedagogical Content Knowledge (TPACK) shows us whether teachers are competent to effectively co-construct, organize and implement a teaching process in which technology is implemented. Teachers with a higher level of knowledge in pedagogy and technology can be expected to feel more competent, motivated and ready to integrate technology into teaching, which proved necessary during the global COVID-19 pandemic.

When differences in TPACK in relation to gender are observed, research has shown either no differences related to gender (Schmid et. al., 2021), or minor differences distributed inconsistently across the components of TPACK. In this study we could not reach a conclusion regarding gender, since the number of male students in the sample was very low.

Development of TPACK depends on the number and nature of ICT courses that students attend, which means that there is a difference between courses that include lectures on technology application and ordinary ICT literacy lectures.

It can be concluded that there is a positive connection between the teacher education program itself and the development of TPACK, which is in accordance with research by Baran et al. (2019). The results of the study emphasize the importance of further analysis of study programs, as well as the need to enrich study programs with pedagogical and IT content intended for future teachers so that they can encourage students' key competences for lifelong learning, especially digital. Moreover, in future research it will be necessary to continue researching the development of TPACK among Croatian students at teacher training colleges with regard to global factors, especially changes in study programs caused by the COVID-19 pandemic.

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A Survey of Teachers' Perspectives on the Reception Ability of Younger Students After Emergency Remote Teaching During COVID-19

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Abstract/Izvleček Emergency remote teaching presented many new and unknown situations. Many studies have examined the impact of distance education on children's learning outcomes, including in the area of first language, particularly in reading and writing skills, and reading literacy. This research examines the area of literature teaching, more specifically the effects of the change in teaching on younger students' reception ability. One hundred and ninety-six teachers participated in the quantitative, explorative study. Responses indicate that there are moderate and major differences in the receptive skills of elementary students in the first through third grades, compared to students taught prior to the pandemic.

Perspektive učiteljev o recepcijski zmožnosti mlajših učencev po poučevanju na daljavo v izrednih razmerah pandemije COVID-19

Poučevanje na daljavo v izrednih razmerah pandemije COVID-19 je prineslo veliko novega in neznanega. Veliko raziskav je bilo posvečenih vplivu šolanja na daljavo na učne rezultate otrok, tudi na področju materinščine, še posebej opismenjevanju in pismenosti. Ta raziskava pa preiskuje področje poučevanja književnosti, natančneje učinek spremenjenega načina dela na recepcijsko zmožnost mlajših učencev. V preiskovalni študiji kvantitativne narave je sodelovalo 196 učiteljev. Njihovi odgovori kažejo, da med učenci prvega vzgojno-izobraževalnega obdobja prihaja do srednjih in večjih razlik na področju recepcijske zmožnosti v primerjavi z učenci, ki so se šolali pred pandemijo.

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Introduction

The founder of reception aesthetics, H. R. Jauss (1998), said that the meaning of a literary text emerges anew in every reading, as a product of the interaction between the text and the reader's reception, which means that the meaning of a literary work is dynamic and changeable, the formation of the meaning of the text is influenced by social and psychological factors, and by the process of acceptance of the literature by the reader. The reception ability of children differs from the reception ability of adults. Youth literary didactics is even more complex. It is built on three foundations: the science of the young reader, the science of the literary work in literary theory and literary history, and the knowledge of what happens when the reader and the literary text meet, which we call the reception aesthetics (Kordigel, 1999).

The communication model of literary didactics has been defined by M. Kordigel Aberšek (2008). In the first phase, the teacher prepares appropriate didactic steps to optimize his students' reception. He must sensitize the children to the reception of the selected literary text and prepare appropriate horizons of expectation for students. He must decide which part of the reception ability he wants to develop during interpretation, which initially overlooked signals he wants to draw to the children's attention, and which method he wants to use to check the newly acquired part of the reception ability and to deepen the literary-aesthetic experience. Such literature teaching must be based on multidirectional communication between the teacher and the students, and it is especially important that the students communicate with each other, because this is how individual contexts are opened and discovered. In the second phase, the students, previously motivated and sensitized by the teacher, experience the text provided by the teacher, each student shaping his or her individual context. Then, the teacher helps children to detect the perhaps overlooked textual signals to actualize the meaning of the text. In the third phase, the student and his imaginary world communicate with each other, while the teacher's role is to encourage the child's activity and creativity by providing imaginary input.

In this way, the teacher develops structural elements of receptive ability in all students, but in each student individually: perseverance, searching for and recognizing the relevance of the problem to one's own life situation, the ability to identify with a literary person, the ability to (co-)create an imaginative (eidetic) representation of literary setting, literary characters and literary events, the ability to

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perceive, understand and evaluate literary events, the ability to recognize the context of individual motifs, the ability to separate author from narrator, the ability to separate reality from fiction, understanding of metaphorical and symbolic expressions, literary knowledge and literary-theoretical knowledge (Kordigel Aberšek, 2008).

Everything is clear and defined, up to the phenomenon of distance learning related to the COVID-19 pandemic. It is a system in which teacher and student are geographically and technologically separated, and it was familiar and globally widespread even before the pandemic (Rogers, 2009). Even online teaching and learning are not new. In the United States alone, more than 250,000 individuals were educated through online courses (Picciano and Seaman, 2009) in 2008. However, this time the concept was different (Hodges et al., 2020). Schools, teachers, students and parents were barely prepared or even unprepared to adapt to e-teaching and e-learning. The new paradigm has grossly interfered with known, well-established, and proven ways of providing education, ways that changed overnight, with no preparation, or teacher education, and with insufficient technology available. E-learning involves several problems that influence how and how much a student will learn, including technology and internet access, absence of an e-curriculum, motivation for e-learning, lack of confidence in the use of e-learning technology, and teachers' attitudes towards online learning (Pestano Perez et. al, 2020). The youngest students were particularly affected by the shift from analogue to digital, since their digital literacy competence, especially in digital learning environments, was limited (Legvart, Kordigel Aberšek and Kerneža, 2021).

Adaptations (e. g. Pryor et. al, 2020), increasing inequality among students (e. g., Gunzenhauser and Saalbach, 2021; Meier Jæger and Hoppe Blaabæk, 2020), learning loss (e. g., Engzell, Frey and Vergahen, 2021; Kuhfeld et al., 2020) and adverse effects on the mental health of children and young people (e. g., Vaillancourt et. al., 2021) have been reported in numerous studies from all over the world. Nevertheless, the effects of the e-distance learning into which we have been forced are not all negative. Several studies show that the pandemic provided an opportunity to restart and reinvent schools (Darling-Hammond et al., 2020). Internet access became more accessible, personalized learning is now the norm, the way student and school progress is measured is being remade, teachers direct their learning through networks and in collaboration with a wider range of partners, educators collaborate with other professionals to face the innovations they seek, and new technologies are

introduced and/or integrated into the system (Magomedov, Khaliev and Khubolov, 2020).

When we looked for research examining the impact of emergency remote teaching on literature class in primary schools and on the reception ability of younger readers, we found no papers covering this area. Two studies had been conducted in field of literature teaching, but in a university setting. Pečenković and Pašič Kodrić (2021) talk about the challenges of teaching children literature online among students at the Faculty of Education. They point out the lack of technical equipment, lack of interesting internet content in all classes, especially in the context of syncretism and literature, difficulty accepting books in PDF format, and the lack of books in e-form. Muzaki (2021) highlights new ways of implementing and assessing learning outcomes in the university setting, a place that will have to adjust to new ways of teaching in the field of curriculum development, methodology and teaching; above all Muzaki emphasizes the need for learning management to produce digitally equipped teachers and learners.

When we examined the impact of emergency remote teaching on students' literacy skills in the first three grades of primary school, teachers reported differences between the COVID and pre-COVID generations. One-tenth of teachers reported no generational differences, less than one- fifth reported minor differences, one-third reported moderate differences, and slightly more than a quarter reported major generational differences in individual areas of learning (Kerneža, 2021). In addition, many problems were reported in teaching literature, especially in school interpretation and students' reception ability.

The situation in literature teaching is extremely complex, especially when we talk about the didactics of youth literature, written for a young reader who is not yet able to perceive and accept textual realities in terms of the author's message. It is defined by a particular type of literary text, a reader who has not yet completed his personal development, and a reception situation based on a reader who has not yet mastered reading technique to the point of receiving and understanding the text in all its dimensions (Kordigel Aberšek, 2008).

Teachers mainly reported problems related to the planning and implementation of literature classes as defined in the Slovenian language curriculum (Poznanovič Jezeršek et al., 2018).

In exploring the field of reception ability of younger students after emergency remote teaching related to the COVID-19 school closure, we focused on the part of the curriculum that provides teachers with didactic recommendations for achieving goals in the field of literature, since these summarize students' receptive skills.

The present study

We were interested in the differences between the pre-COVID and COVID generations in the process of school interpretation, within which students are supposed to *observe individual elements of the text to create a response to the literary text*. They should *compare the results of reading the literary text, present them, and exemplify them with reference to the literary text*. Students should *form oral texts and towards the end of the educational period* (in line with their ability to write), they should also *form written texts after reading literature*. The reception ability should also be developed by *creating/(re-)creating after reading the literary text*. According to the communication model of literature, the students remain at the centre of school reading, and the teacher encourages students to *overlap the semantic field of the literary text*, and *the student's horizon of expectations stemming from his extraliterary and intertextual experience*.

We were interested in any differences between the COVID and pre-COVID generations as reported by teachers. We made a general hypothesis that there would be differences in reception ability in younger students after emergency remote teaching because of COVID-19, compared to the generation before the pandemic, which was educated in a school environment under "normal" conditions. The research question that will help us to confirm or reject the hypothesis is as follows: Do teachers of younger students notice differences in the COVID and pre-COVID generations in reception ability after emergency remote teaching?

Method

We designed exploratory research (Stebbins, 2011). The study was an investigation of a new phenomenon, emergency remote teaching, that emerged during the SARS-CoV-2 pandemic. At the end of the 2020/2021 school year, when distance learning had lasted 11 weeks (in addition to 6 weeks in the previous school year, plus one week of extra school holidays), teachers were asked to complete a questionnaire that

provided us with a large and representative sample. The collected data were processed with the statistical program SPSS and analysed in the form of descriptive statistics. The findings were verified and confirmed by a Chi-square test.

Participants

The link to the online questionnaire, with a request to send it to first, second and third grade teachers, was sent to 456 Slovenian elementary schools included in the Register of Educational Institutions and educational programs published on the website of the Ministry of Education, Science and Sports of the Republic of Slovenia. It was also shared in larger teacher groups on social media. The simple random sample comprises 196 elementary school teachers teaching in first (6–7-year-old students), second (7-6-year-old students) or third (7–8-year-old students) grade. Ninety-eight teachers teach in first grade (50.0%), 55 teachers in second grade (28.1%) and 43 teachers in third grade (21.9%). The share of teachers in the first grade is greater, as there are two teachers collaborating in each class at the same time.

Instruments

In the first part of the questionnaire, we were interested in what class the teacher was teaching. In the second part, we asked the teachers about the differences between the COVID and pre-COVID generations in terms of their skills in literature class. On a scale of 1 to 4, teachers rated the differences between generations (1 – I do not notice differences between generations; 2 – I notice minor differences between generations; 3 – I notice moderate differences between generations; and 4 – I notice major differences between generations). If they were unable to assess the differences, they chose the response indicating that they could not assess these skills. Student competences in the field of literature reported by teachers are based on the Slovenian language curriculum:

- observing individual elements of the text to create a response to the literature text,
- comparing the results of reading a literary text, presenting them, and exemplifying them with reference to the literary text,
- forming oral and/or written texts after reading literature,
- creating/(re-)creating after reading a literary text,

- overlapping of the semantic field of the literary text and the student's horizon of expectations, stemming from his extraliterary and intertextual experience.

In the third part of the questionnaire, we asked teachers an open-ended question, about whether they noticed any other changes between COVID and pre-COVID generations.

The questionnaire was tested on a sample of nine teachers. The validity, reliability, and objectivity of the questionnaire were ensured.

Results

The results presented in Table 1 show that most teachers found moderate differences in reception ability between COVID and pre-COVID generations.

Table 1: Frequency (f) and structural percentage (f%) of teacher-reported differences in reception ability between COVID and pre-COVID generations.

	No differences		Minor differences		Moderate differences		Major differences		Unable to assess		Total	
	f	f%	f	f%	f	f%	f	f%	f	f%	f	f%
Observe to create a response	39	19.9	54	27.4	60	30.6	31	15.8	12	6.3	196	100.0
Compare, present, exemplify	29	14.8	53	27.0	60	30.6	34	17.3	20	10.3	196	100.0
Oral/written text	14	7.1	43	21.8	54	27.4	69	35.2	16	8.5	196	100.0
Create/recreate	30	15.3	45	23.0	51	26.0	54	27.4	16	8.5	196	100.0
Semantic, horizon	24	12.2	44	22.4	49	25.0	44	22.4	35	18.0	196	100.0

Notes: *Observe to create a response*: observing individual elements of the text to create a response to the literary text; *Compare, present, exemplify*: comparing the results of reading a literary text, presenting them, and exemplifying them with reference to the literary text; *Oral/written text*: forming oral and/or written texts after reading literature; *Create/recreate*: creating/(re-)creating after reading a literary text; *Semantic, horizon*: overlapping of the semantic field of a literary text, and the student's horizon of expectations stemming from his extraliterary and intertextual experience.

When we talk about *observing individual elements of the text to create a response to the literary text*, most teachers note moderate differences between generations, followed by those who note minor differences.

One-fifth of teachers note no differences between generations. The results of the Chi-square test show that there are statistically significant differences between the answers ($\chi2 = 81.898$, p = 0.000). More than half the teachers note moderate and minor differences between generations when students *compare the results of reading a literary text, presenting them, and exemplifying them with reference to the literary text*. Just under a tenth of teachers notice major differences between generations, and fewer notice no differences between generations. There are statistically significant differences in teachers' assessments ($\chi2 = 70.449$, p = 0.000). The ability where teachers notice the greatest differences between generations, which is confirmed by the Chi-square test ($\chi2 = 107.061$, p = 0.000). is *forming oral and/ or written texts after reading literature*. Major and moderate differences are noted by three-fifths of participating teachers, one-fourth of teachers note minor differences, and less than one-tenth of teachers note no differences. *Creating/ recreating after reading a literary text* is an area where most teachers note major and moderate differences between generations, slightly fewer teachers report minor differences, and three-fifths of respondents note no differences between generations; the differences are statistically significant ($\chi2 = 67.878$, p = 0.000). Most teachers note moderate intergenerational differences in the *overlap of the semantic field of the literary text, and the student's horizon of expectations, stemming from his extraliterary and intertextual experience*, while only a few teachers note major or minor intergenerational differences. A statistically significant difference in the results is confirmed by the Chi-square test ($\chi2 = 43.571$, p = 0.000)

If we look at the results in terms of differences observed by teachers and not in terms of literary skills, we observe that teachers' responses range from 12 to 19 percent, and the ability to create oral and written texts stands out, with only seven percent of respondents noticing no differences. There are no major discrepancies in reporting of minor differences between generations, as the percentages range from 21 to 27. The same applies to moderate differences between generations, reported by 26 to 21 teachers within different abilities. A larger range is noted when it comes to major differences between generations, which is almost 20 percent.

We asked teachers to report other observations related to differences between COVID and pre-COVID generations (Table 2).

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Table 2: Frequency (f) and structural percentage (f%) of teacher-reported other observations in relation to differences between generations.

Development area	f	f%
Social emotional	8	4.1
Cognitive	14	7.1
Communication	5	2.6
All areas	7	3.6
Other – in general*	10	5.1
Other – literature class**	14	7.1
No answer	138	70.4
Total	196	100.0

Fifty-eight teachers answered our question about other problems they face and observe during their work with the COVID generation. Most reported things that indirectly affect their work in the literature classroom. Teachers reported cognitive problems related to problem solving, learning skills, abstract thinking, and creativity. Slightly fewer teachers reported impairments in the areas of socio-emotional development (e. g., interaction, sense of community, self-confidence, cooperation, etc.), all areas of child development in general, and communication (e. g., working in groups, greater need for communication, attention, listening, etc.). Teachers also report other general problems*: low parental criteria, the generally detrimental effect of technology on children; the probability that differences will become apparent in the coming years, and the reality that students had been negatively rated before the pandemic. We were particularly interested in observations dealing directly with literary texts**. Teachers reported various aspects of parental influence: instead of reading fairy tales and books, parents give their children a tablet or smartphone; parents care more about developing reading techniques, less about interpreting texts; shared reading is becoming less important, with fewer children participating and completing the Reading Badge. There are also problems with the students' concentration while listening to the teachers' narration and reading: It is difficult for them to listen to the fairy tale until the end, nor do they know what the story is about; the students are restless and cannot remain quiet and still to listen to the full story; the children are absent-minded while listening to the fairy tale. Children show a lack of imagination, which could be a result of the stated lack of general knowledge and exposure to art and literature; they have no ideas for dramatizing the text. The teacher's observation that students do not read enough could be related to another teacher's statement that students have modest vocabularies.

Teachers also report that children's ability to formulate oral and written text deteriorates from generation to generation and that the pandemic has deepened the differences; some differences are complex and difficult to attribute to the pandemic alone.

Discussion

What should literature teaching look like? Why is teaching literature not the same as teaching other subjects, and why it should not be compared to teaching other educational fields? M. Kordigel Aberšek (2008) writes about this in the scholarly monograph *Didactics of Youth Literature*.

A literature lesson should not be just a classic school lesson, lasting 45 minutes. It requires motivation in which we prepare children's horizon of expectation for a carefully selected text, which will address students at their current level of development and interest and prepare them to encounter a text that they do not read themselves but that is narrated by the teacher, so that they can focus their energy on observing, understanding, and evaluating the reality of the text. The teacher then thoughtfully directs the children's attention to textual clues that they may have missed when encountering the literary text, but which they can recognise if we call their attention to them, thereby strengthening their reception ability. At the end of the didactic unit, we deepen their experience and encourage their creativity. For a teacher to accomplish all this, he must carefully plan didactic communication: the organisation of the lesson, what he will say, what he will do, what his students will do, and what psychological effect this will have on the child and the child's feelings. In the case of distance learning, this didactic communication was largely absent. In emergency remote teaching, the child was, when a literature class was on the schedule, mostly if not entirely left alone, which is in stark contrast to what literature classes are supposed to be. The democratic dialogue, which should be the basis of communication according to the didactics of youth literature, when the author's speech, the message of the literary text, the teacher's speech and the speech of ALL students are interwoven, was mostly absent in the hours of Slovene class happening during emergency distance learning. Many goals that would otherwise be achieved without major problems in a traditional learning environment were not achieved during distance learning.

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These results provide answers to the research questions. Teachers do notice differences in reception ability between the COVID and pre-COVID generations of younger students. They report moderate differences in observing individual elements of the text to create a response to the literary text, in comparing the results of reading literary texts, presenting them, and exemplifying them with reference to the literary text, and in overlapping of the semantic field of literary texts, and the student's horizon of expectations stemming from his extraliterary and intertextual experience. Major generational differences are emerging in forming oral and/or written texts after reading literature and in creating/(re-)creating after reading literary texts. Our hypothesis is confirmed. There are differences in reception ability in younger students after emergency remote teaching due to COVID-19, compared to the generation before the pandemic which was educated in a school environment, under "normal" circumstances.

The main limitation of our survey is the sample size, so the results should be only partly generalised. The conclusions should be taken with caution. We do not have the answers of the teachers before the pandemic, which would help us to better understand the observed phenomenon and possible changes in the reception ability of students that might have occurred even before the outbreak.

Conclusions

In search of research that examined the effect of emergency distance education on reception capacity in younger students, we mostly found research about reading literacy or reading comprehension. The field of literature didactics is relatively poorly represented. Therefore, our research is particularly important because it explores a somewhat forgotten field of literature didactics. It would be useful if there were data on the reception ability of students before emergency remote teaching that could be compared to the receptive ability of young students today. A larger sample of teachers interviewed could also contribute to greater representativeness of the data obtained.

There are many starting points for future research. We wonder how remote work affects other aspects of children's literary development, such as storytelling, where, as in the development of receptive skills, the role of the adult plays an important role (Baloh, 2015). Koritnik (2015) states that with the help of a stimulating learning environment, which is also created by the teacher's appropriate choice of methods,

we can positively influence children's receptive development, even without lowering the goals. We are interested in how a teacher can adapt the digital learning environment, digital teaching, and digital learning to have a positive impact on children's reception ability even without sacrificing goals. In the context of distance education, we should not look for the negative alone, because distance learning also offers many advantages that could be considered when it comes to reception ability. Ozmen in Atıcı (2014) studied the use of learning management systems supported by social networking sites in distance education to determine the views of learners regarding these platforms. The model, which deals with positive and negative aspects of lecturing through a distance education platform, points out some aspects that could also have a positive effect on distance work in literature classes: the opportunity for repetition, communication, immediate feedback, visual ease of screens, absence of distracting items, easy self-expression and independence. A pandemic is not necessarily the only reason for distance education. Non-crisis situations may also require the teacher to adapt his or her work, such as in the case of a child's illness, a child athlete, a special-status student, and others (Pestano Perez et al., 2020). Professional teacher development in reading literacy and reading culture is important even in "normal" circumstances (Pečjak, 2021). It would be especially important to offer and present the opportunity to deliver quality literature instruction in other environments, such as digital, when various circumstances make it unavoidable. We believe that the priority that our research highlights is not only to focus on the consequences of the pandemic and to find solutions for distance literature class. It is also about the reactions of teachers who noted differences even before distance learning, but which have now deepened. What is the reason for these differences? Possible answers are already reflected in the responses of teachers in this study, and as the teachers replied in our questionnaire – the reasons are not necessarily limited to classroom, but (also) to the home environment, e. g. using cell phones instead of reading, losing the importance of family reading, lack of general knowledge and non-exposure to art

This paper shows that during emergency remote teaching, there were differences in the reception ability of first to third grade elementary school students who participated in distance education.

The research does not offer solutions in this area, but it does show that when we talk about reading, reading motivation, reading literacy, and other "readings", we need to think about everything that reading literature entails – from expanding children's imagination, developing children's cultural legacy, teaching about consequence and morals, learning about story structure, having fun, reducing stress, improving literacy, increasing general knowledge, enjoying magic moments of imaginary worlds with loved ones, and many more, up to reception ability.

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IMPLEMENTATION OF ACTIVE LEARNING STRATEGIES: THE CASE OF SECONDARY SCHOOLS

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Abstract/Izvleček The purpose of this study was to investigate implementation of active learning strategies at secondary schools in Ethiopia. To conduct the study, descriptive survey design was employed. The study was complemented by a mixed method approach that employed both qualitative and quantitative data collection tools such as observation checklists, questionnaires and interviews. The findings of the study reported that most of the respondents perceived active learning strategies positively. Despite their positive perceptions, their usage of active learning strategies was low. Finally, it is recommended that responsible bodies should reorganize the conditions and facilitate necessary input for the implementation of active learning strategies.

Izvajanje aktivnih učnih strategij: primer srednjih šol
Namen raziskave je bil preučiti izvajanje strategij aktivnega učenja na srednjih šolah v Etiopiji. Uporabljena sta bila deskriptivna metoda raziskovanja in pristop mešanih metod, pri čemer smo uporabili tako kvalitativna kot kvantitativna orodja za zbiranje podatkov, kot so kontrolni seznami za opazovanje, vprašalniki in intervjuji. Iz izsledkov raziskave izhaja, da ima večina anketirancev pozitivna stališča do aktivnega učenja, a da kljub pozitivnim percepcijam učitelji pri svojem delu aktivne učne strategije uporabljajo v omejenem obsegu. Predstavljena so priporočila odgovornim organom za ustvarjanje pogojev in sredstev za uvajanje aktivnih učnih strategij v srednje šole.

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Introduction

Education in any country is aimed at bringing intended learning outcomes to learners. In schools the purpose of education is realized at various levels, starting from a single topic of instruction at a subject level in a given grade. The learners' capacity to solve problems will prepare them for membership in a modern community. Education has an immense impact on society; it trains the human mind to think and take appropriate decision and action. It is a process that transmits experience and new findings over years, (Ministry of Education, 1994).

To develop skills, knowledge and appropriate behaviour on the part of learners, the only means is promoting education. To impart education to the student, various methods and strategies should be applied in the classroom. Methods are ways of imparting multiple concepts and skills to learners. There are various methods in the process of teaching and learning. These methods centre on the teacher as the focus of any activity performed in imparting the lesson; as stated by Bush and Bell (2002), the teacher knows best. In addition, the traditional teacher centred approach allows teachers to play their roles in transferring facts, opinions, rules and other important material directly to the students. The main theme of this approach is what is taught rather than what the student has learnt.

However, the main objective of education is to enable learners to develop knowledge, skills and attitudes, an objective that is achieved through a range of methods. At different times, different methods of learning have been investigated and have remained dominant for a certain period of time, such as teacher centred methods, (Bethel, 2011).

Aggarwal, (2010), stated that education enables us to lead a better life in dynamic world. In this respect, education has passed through continuous change. Given the multiple weaknesses of the traditional teacher-centred approach, the active learning method was identified and supported by many scholars for use in the classroom. According to the constructivists learning theory, active learning is known by the name discovery learning. Learning begins with the experience of the student. Moreover, constructivist learning theory is based on the principle that, through involvement in various activities, students discover their own way of learning.

According to Snowman and McCown, (2011) constructivism is based on the idea that meaningful learning occurs when people actively try to make sense of the world. This strategy does not allow students to do nothing but allows them to engage actively in the process of teaching and learning.

This does not mean that teachers are automatically out of the process, instead' they facilitate and guide the student to the target teaching and learning. This method assumes that learners play an active role in the teaching-learning process rather than being passive. Thomas (2016) affirms that to survive in a new, globally competitive world, today's children will need creativity, problem-solving abilities, and a passion for learning, a dedicated work ethic and lifelong learning opportunities. Students can develop these abilities through instruction based on best practice teaching strategies. Therefore, researcher with this information is encouraged to conduct research focusing on the investigation of secondary school teachers' perception, practice and challenges in active learning strategies utilization in Yilmana district secondary school.

The education and training policy (1994) and the existing curriculum in Ethiopia call for active learning. The curriculum reforms initiated imply a shift from passive learning to more active education (Lue, 2000). There have been continuous revisions in the instructional approaches to offer quality training and make active learning more practical.

Abo, (2013) and Ayele (2014) formed their hypothesis around the same issue, and their findings revealed that active learning failed in school practice because of a lack of time to cover the subject, students' attention on exam-oriented topics' and a lack of adequate materials. However, neither of these studies was intended to investigate teachers' perceptions and practices or the challenges they encountered in the implementation of active learning strategies in secondary schools, and no investigation had previously done in the selected district.

A Framework for Organizing Active Learning
The study was modelled by a conceptual framework depicting a representation of dependent and independent variables and the relationships between them, as shown by arrows. In this conceptual framework, the teaching method and students' conceptual understanding are the two main variables.

It is supposed that the dependent variable (the students' conceptual understanding about water) might be affected by the independent variables (the traditional teaching method and the 5E instructional cycle approach) and would improve after the treatment by developing an appropriate or effective teaching method. In other words, if the teacher is to take an effective teaching strategy, then the students must improve their conceptual understanding. This study claims that the implementation of 5E leaning cycle models significantly improves the conceptual understanding of students in comparison to the traditional teaching method.

It is not possible to provide universally accepted definitions for all the terminology of active learning, since different authors in the field have interpreted some terms differently. However, it is possible to provide some generally accepted definitions and to highlight distinctions in how common terms are used.

To achieve the aims of the study, specific objectives were designed:

Purpose of the study

- To examine the perception of teachers towards the use of active learning strategies.
- To explore whether active learning strategies are being practiced by teachers in secondary schools.
- To identify factors that hinders teachers in implementing active learning strategies in secondary schools.

Research question

1. In line with the above objectives of the study, research questions were developed:
2. What are the perceptions of teachers towards active learning strategies in secondary schools?
3. To what extent is the active learning strategy being implemented in secondary schools?
4. What are the major challenges encountered in practicing active learning strategies?

Methods

The descriptive survey research method was employed to carry out the present study. Thus, mixed method research was organized by including the characteristics, features or facts about the given population. To make the results more feasible and suitable, to investigate the current situation of perceptions, practices and challenges of teachers in implementing active learning strategies in secondary schools, the researchers used a mixed approach.

Source of data
Primary source data was used in the study. Yilmana district secondary school teachers, principals, vice principals and supervisors were used as the primary sources of data in the study.

Research model
The target populations of the study are secondary school teachers, principals, vice principals and supervisors. Accordingly, in Yilmana district educational office, there were 109 (87 male and 22 female) teachers. A total of 109 secondary schools teachers were included from five schools. Five principals, five vice principals and two schools supervisors were included in the interviews. To determine the composition of the sample, a proportional sampling technique was used to select the number of participants from the proposed study of the sample school. First, a purposive sampling technique was used to select the district. Second, a comprehensive sampling technique was used to select the schools. Third, a proportional sampling technique was used to select the numbers of teacher participants from the sample schools, and then a systematic random sampling technique was used to select teachers from each school. For principals, vice principals and supervisors, a comprehensive sampling technique was used.

Data collection tool
To obtain data from teachers, principals, vice principals and supervisors, questionnaires and interviews were used as data gathering instruments.

Questionnaire
A questionnaire was one of the instruments developed based on the reviewed literature to collect relevant data from teachers to answer the basic questions raised.

The questionnaire was employed to collect data from teachers. The questionnaire item consists of both close-ended and open-ended items in English. Based on information obtained from the literature, the researchers prepared both open-ended question and closed-ended items.

Interview

Interviews were among the data gathering instruments used to collect information. Supporting this idea (Best and Kahan, 1989) stated that interviews constitute the major way in which a qualitative evaluator seeks to understand people's perceptions. A semi-structured interview was designed to gather the qualitative data from school principals, vice principals and supervisors because semi structured interview items have the advantage of flexibility; in which new questions could be posed during the interview based on the responses of the interviewee.

The interview guide question set for all groups of respondents had one part aimed at obtaining information related to the basic research questions, and the researcher needs their opinions to strengthen their responses on the questionnaire part. In addition, data obtained through interviews with five school principals (male), five vice principals (male) and two supervisors (male) has the advantage of identifying what was happening in the classroom. Moreover, it helps the researcher to crosscheck or triangulate the data obtained from the questionnaire response items.

Data collection process

The researcher adopted three steps in collecting the data for the study. First, relevant literature was reviewed to get adequate information on the topic. Second, the objectives and research question were designed to show the direction of the study. Third, data gathering tools were developed. In the process of data collection for the study, the researchers used a procedure. The questionnaire was prepared in English, and the interviews with principals, vice principals and supervisors were conducted in the selected schools.

Methods of data analysis

The descriptive survey method with both quantitative and qualitative data analysis was used to answer the research questions and to attain the objectives. The quantitative data were collected, coded, tabulated, analysed, described and interpreted in such a manner as to facilitate findings being obtained from the study.

First, the data was gathered through the lose-ended questionnaire part I (Perceptions of teachers in implementing active Learning strategies in Classrooms) by using a five-point Likert scales (strongly agree, agree, undecided, disagree and strongly disagree). Data processing and analysis were done by the Statistical Package for Social Science (SPSS) version 20 computer manual to analyse the quantitative data. Then, the qualitative data gathered through interviews and open-ended questionnaire analysis was done by organizing, summarizing and interpreting narrative description.

Results

Characteristics of the Respondents
Table 1 show that 109 teachers were included in the study, 79.8% of whom were males, while the remaining 21.2% were females. Compared with male teachers, the numbers of female teachers in secondary schools was low.

Table 1: Teachers' sex, qualifications, and the average number of students per class

No.	Variables	Characteristics	(frequency=109) teachers' response	
			Frequenc	Percent (%)
1	Sex	Male	87	79.8
		Female	22	20.2
		Total	109	100
2	Qualifications	Degree	93	85.3
		Master	16	14.7
3	Average number of students per class	41-50	1	20
		61-70	4	80

With respect to educational background or qualifications, 85.3% and 14.7% of participants were holders of first degrees and second degrees in academic subjects, respectively. As to the average number of students per class, 20% of the classes had an average of 41-50 students. The majority, 80%, of the classes had 61-70 students.

Presentation and Analysis of Data obtained through questionnaires
In analysing the perceptions of teachers about active learning strategies, a questionnaire titled "Perceptions of Teachers in Implementing Active Learning Strategies in Classrooms, Practice of Active Leaning Strategies and Factors Affecting the Implementation of Active Learning Srategies" served as the primary source of information.

In Table 2, the items related to assumptions about active learning, and advantages of active learning were presented properly to establish participants' perceptions. Item 1 aims to assess if students' lack of interest and motivation has affected the implementation of active learning. As can be seen in Table 2, 105 participants (96.3%) responded and the mean value of their responses (4.62) ranges from "Agree" to "Strongly Agree." Hence, most of the teachers agreed on the idea.

Item 2 shows that, 66 (60.6%) of the sample respondents were strongly agreed on the idea that Active learning is a suitable method to change student beliefs and attitudes, 33 (30.3%) of them also agree with it, and the others respondents, 7 (6.4%) and 3 (2.8 %) were respectively undecided or in disagreement, and the mean value of their response (4.49) ranges from "Agree" to "Strongly Agree." The results imply that most of the teachers assume active learning strategies to be suitable to change student's beliefs and attitudes.

Table 2: Perceptions of Teachers in Implementing Active Learning in Classrooms

Items	1=S. Disagree		2= Disagree		3= Undecided		4= Agree		5=S. Agree		$\sum vxf$	$X=\sum \frac{Vxf}{N}$
	f	%	f	%	f	%	f	%	f	%		
1	-	-	3	2.8	1	0.9	30	27.5	75	68.8	504	4.62
2	-	-	3	2.8	7	6.4	33	30.3	66	60.6	489	4.49
3	11	10.1	8	7.3	13	11.9	24	22	53	48.6	427	3.92
4	-	-	2	1.8	10	9.2	40	36.7	57	52.3	479	4.39
5	8	7.3	13	11.9	11	10.1	31	28.4	46	42.2	421	3.86
6	10	9.2	34	31.2	15	13.8	37	33.9	13	11.9	336	3.08
7	15	13.8	27	24.8	5	4.6	29	26.6	33	30.3	365	3.35
8	-	-	6	5.5	16	14.7	32	29.4	55	50.5	463	4.25
9	-	-	4	3.7	3	2.8	35	32.1	67	61.5	492	4.51
10	4	3.7	7	6.4	13	11.9	39	35.8	46	42.2	443	4.06
11	3	2.8	5	4.6	10	9.2	47	43.1	44	40.4	451	4.14
12	-	-	6	3.7	7	6.4	49	45	47	43.1	464	4.26
13	-	-	4	3.7	6	5.5	28	25.7	71	65.1	493	4.52
14	-	-	6	5.5	7	6.4	40	36.7	56	51.4	473	4.34
15	-	-	5	4.6	6	5.5	49	45	49	45	469	4.30
16	-	-	7	6.4	7	6.4	56	51.4	39	35.8	454	4.17
17	11	10.1	44	40.4	44	40.4	10	9.2	-	-	271	2.49
18	13	11.9	58	53.2	10	9.2	21	19.3	7	6.4	278	2.55
19	18	16.5	33	30.3	16	14.7	30	27.5	12	11	312	2.86
20	3	2.8	41	37.6	31	28.4	25	22.9	9	8.3	323	2.96
21	-	-	6	5.5	5	4.6	53	48.6	45	41.3	464	4.26
22	-	-	5	4.6	3	2.8	38	34.9	63	57.8	486	4.46
23	-	-	3	2.8	2	1.8	34	31.2	70	64.2	498	4.57
24	-	-	2	1.8	4	3.7	48	44	55	50.5	483	4.43
G mean												3.95

Item 3 shows, teachers' lack of interest in and motivation towards the teaching profession have affected the implementation of active learning. Consequently, 48.6% of them were strongly agreed, and 22% of them agreed on the idea. However, 7.3% of the sample respondents disagreed that their teachers' lack of interest in and motivation towards the teaching profession has affected the implementation of active learning, and 10.1% of them strongly disagreed with the statement. Finally, 11.9% of the sample respondents were "undecided" and the mean value (3.92). From the table, most sample teachers felt that their teachers' lack of interest and motivation towards the teaching profession has affected the implementation of active learning.

For items 4, the mean values of the responses were 4.39. This indicates that teachers strongly agreed with the idea that teachers must prepare students to communicate effectively. Item 9 says "active learning creates opportunities to share experiences and encourage friendship among students."

On this item, (61.5%) of the respondents showed strong agreement with the issue. Furthermore, the mean value of the responses (4.51) strengthens support for the assumption raised. Item 11 says "Active learning creates a democratic relationship between the teachers and the students (40.4%) and (43.1%) of the respondents strongly agreed and agreed with the statement, respectively, and the mean value of their response (4.14) ranges from "Agree" to "Strongly Agree." The results imply that most of the teachers felt positive about the concepts.

For items 12, and 21, the mean value of the responses was (4.26). This shows that teachers agree or strongly agree that active learning makes students responsible for their own learning and that students have a chance to reflect on the teaching learning process. Item 13 says, students learn best when they are actively involved and when they practice 'learning by doing'; on this item, (65.1%) of respondents expressed strong agreement with the issue, and the mean value of the response is (4.52). That means most of the teachers agreed with the statement. Supporting this idea, 'learning by doing' is a theme that many educators have stressed since John Dewey's convincing argument that students must be engaged in an active quest to learn new ideas. Students should be presented with real life problems and then helped to discover information required to solve the problems.

On the other hand, item 14 assesses if active learning enhances students' level of understanding and involves them in problem solving. The percentages for 'strongly agree' and 'agree' were 56 (51.4%), 40 (36.7%), respectively, and the mean value for this response was (4.34). This means teachers repored strong agreement. This implies that most teachers believe that active learning strategies can enhance students' level of understanding and enables them to solve problems independently. Item 15 assesses if active learning methods make a major contribution to scaling up the quality of education. As can be seen in Table 2, (90% of participants) strongly agree, or agree, and the mean value of their responses (4.30) ranges from "Agree" to "Strongly Agree. The item indicates that most teachers have positive attitudes towards active learning strategies.

According to Table 2, item 18, provoked disagreement formed most teachers 58(53.2%) and the mean value is (2.55). This means teaching as the sole responsibility of teachers is not the way to students. In addition, they were asked to give their views on whether teaching is enough to prepare students to understand their environment which is the aim of item 17. Consequently, among the teachers, all but ten respondents said "agree", but the rest reported view that were mostly neutral or disagreement 44 (40.4%):

Even respondents (10.1%) recorded strong disagreement and the mean value is (2.49). Item 20 "The teacher holds most of the knowledge necessary for the students," The mean value for this response is 2.96 between 2 and 3, i.e., the teachers reflected their disagreement. This implies that the teachers believe that students can also be sources of knowledge/information. Item 22 shows that, 63 (57.8%) of the sample respondents strongly agrees with the idea that active learning enhances self-confidence and independent learning among students; 38 (34.9%) of them also agree on this, and of the remaining respondents, 3(6.4%) and 5(4.6%) were, respectively, undecided or disagreement, and the mean value of their response (4.46) ranges from "Agree" to "Strongly Agree." the result implies that most of the teachers have a positive attitude towards the questions. Item 23 says, "I believe that active learning prepares for participation." This issue was supported by the majority (64.2%) of respondents. The mean value of the responses is (4.57) between "Agree" and "strongly agree". The general analysis of all the items indicates that most teachers have a positive attitude towards active learning. The grand mean value (3.95) of all responses comes close to supporting the values for agreement. Hence, one can assume that these teachers perceived active learning strategies positively.

Table 3: Frequency, Percentage and Mean Values of Teachers' Use of Active Learning Strategies

Items	1= Not at all		2= rarely		3= some Times		4= frequently		5= Always		∑vxf	X=∑Vxf N
	f	%	f	%	f	%	f	%	f	%		
1.Group work	-	-	2	1.8	64	58.7	25	22.9	18	16.5	386	3.54
2.problem solving method	10	9.2	29	26.6	33	30.3	27	24.8	10	9.2	325	2.98
3.role playing	21	19.3	36	33.0	32	29.4	13	11.9	7	6.4	276	2.53
4.brain storming	4	3.7	23	21.1	33	30.3	28	25.7	21	19.3	366	3.36
5.group discussion	1	0.9	2	1.8	35	32.1	45	41.3	26	23.9	420	3.85
6.project method	23	21.1	36	33	40	36.7	5	4.6	5	4.6	260	2.39
7.peer teaching	5	4.6	22	20.2	56	51.4	21	19.3	5	4.6	326	2.99
8.demonstration	-	-	2	1.8	47	43.1	34	31.2	26	23.9	411	3.77
9.debating	28	25.7	34	31.2	34	31.2	8	7.3	5	4.6	255	2.34
10.lecture method	-	-	-	-	10	9.2	41	37.6	58	53.2	486	4.44
11.question and answer	1	0.9	6	5.5	25	22.9	38	34.9	39	35.8	435	3.99
12.cooperative learning	12	11.0	22	20.2	44	40.4	24	22	7	6.4	319	2.93
13.fied trip	73	67	21	19.3	10	9.2	1	0.9	4	3.7	169	1.55
14.discovery method	38	34.9	41	37.6	18	16.5	10	9.2	2	1.8	224	2.06
15.student independent work by giving homework/ assignments	1	0.9	10	9.2	31	28.4	31	28.4	36	33	418	3.83
G mean												3.10

As can be seen from Table 3, different active learning strategies were provided as examples. Accordingly, the frequency distribution for the use of these strategies by respondents is presented as follows:

The first one is a teacher focused method, the "lecture" method. It was reported by almost (53.2% of) the teachers, as it has always been used. The mean value of the responses (4.44) indicates frequent use. In response to the item, teachers claimed to use the lecture method frequently.

On the other hand, among common active learning strategies presented in Table-3, 'Group work' was reported by 58.7% of the respondents. This method is employed 'sometimes'. The mean value for group work is (3.54). This value indicates occasional use of group work in the secondary schools under study.

The other active learning strategy used by the teachers was 'Questioning and Answering'. The mean value (3.99) indicates that the teachers use 'Questioning and answering' nearly as much as values for 'sometimes'. The mean value for 'Discussion' (3.85) is also close to the values for 'sometimes'. This value indicates that the teachers employ this strategy in their classrooms sometimes. On the other hand, student independent work in the form of homework/assignments was reported by 33%, 28.4% and 28.4% of the teachers as being used always, frequently and sometimes, respectively. The mean value of the response, (3.83) indicates that this strategy is sometimes used by the teachers.

Another commonly used active learning strategy, 'Demonstration', is indicated by the mean value of (3.77). The mean value shows that this active learning strategy is used by the teachers sometimes. Similarly, 'Brainstorming' shows mean value of (3.36 and is thus) sometimes employed by the teachers. The overall mean (3.10) is approaching 3, which is equal to the value for 'sometimes'. From the teachers' responses, therefore, one can say that active learning is sometimes employed in the secondary schools.

Table 4: Frequency, Percentage and Mean Values of Factors Affecting Teachers' Implementation of Active Learning

Items	1=Not Serious		2= Undecided		3= Serious		4=Most Serious		(∑vxf)	X=∑Vxf/N	M. Ranking
	f	%	f	%	f	%	f	%			
1.Lack of commitment	8	7.3	4	3.7	58	53.2	39	35.8	346	3.17	4
2.Shortage of time to practice active learning	8	7.3	7	6.4	45	41.3	49	45	353	3.24	3
3.Communication problems	15	13.8	5	4.6	54	49.5	35	32.1	327	3.00	7
4.Lack of students interest in active learning	6	5.5	1	0.9	46	42.2	56	51.4	370	3.39	2
5.Students' beliefs and perceptions	5	4.6	7	6.4	65	59.6	32	29.4	342	3.14	5
6.Teachers'lack of interest	13	11.9	21	19.3	45	41.3	30	27.5	310	2.84	10
7.Teachers' beliefs and perceptions	20	18.3	18	16.5	46	42.2	25	22.9	294	2.70	11
8.Large class size	2	1.8	-	-	31	28.4	76	69.7	399	3.66	1
9.Diversity of teachers interest	11	10.1	3	2.8	60	55	35	32.1	337	3.09	6
10.Lack of instructional materials	16	14.7	8	7.3	51	46.8	34	31.2	321	2.94	9
11.Design of curriculum materials (text-book, teacher guide, syllabus)	21	19.3	8	7.3	34	31.2	46	42.2	323	2.96	8

Table 4 shows factors affecting teachers' implementation of active learning. In this part there were eleven factors assumed to be operative in the implementation of active learning. Among these factors, the researcher has selected six for further discussion. These factors have been selected because they were identified by respondents as significantly affecting the implementation of active learning. There is no question that interest, beliefs, and perceptions are crucial factors in implementing active learning in the classrooms. As can be seen from Table 4, one of the factors hindering the implementation of active learning is a lack of students' interest in active learning. This factor is proposed by 51.4% of the teachers as the most serious one. Another negative factor in the implementation of active learning as proposed by the teachers is students' belief and perception, which 59.6% find to be serious. According to the principals', vice principals' and supervisors' interviews, students do not like to be taught by active learning strategies. Hence, teachers found it difficult to implement active learning. It is also challenging to apply active learning in large classes and in situations where there is a lack of teachers' commitment. In line with this, 69.7% of the teachers identified large class size the teachers' lack of commitment (53.2%) is the most serious factors affecting the implementation of active learning strategies. Like any other educational issues in the teaching-learning process, it is also possible to think that active learning may have limitations during its implementation under real classroom conditions.

Presentations and analysis of Data Obtained through Interview
School principals, vice principals and supervisors can be considered prominent figures in the school system since they are assigned to lead all activities in the school environment. It is common for a school principal, vice principal or supervisor to be responsible for both academic and administrative affairs in the school. So, on this basis, the researchers conducted interviews with five school principals, five vice principals and two supervisors. Accordingly, after polite introductions, the researchers conducted the interviews. All these school principals, vice principals and supervisors were holders of second degrees. On the question asking them to explain their understanding of active learning strategies, all of them explained that they had some awareness of active learning and how to judge the implementation of active learning strategies; on this question; their responses can be summarized as indicating their belief that traditional teacher-centred methods yield great focus than active learning strategies.

In this case the teacher does a lot in the classroom by lecturing; whereas students are passive learners; in teacher-centred methods, more focus is on memorizing facts than on applying what has been learn and on enhancing the quality of education.

Some questions enquire whether the school environment is conducive to implementation of active learning strategies. Whether there are sufficient instructional resources? And if teachers utilize the allocated instructional time properly? In this case all principals, vice principals and supervisors say that there is no conducive learning environment to implement active learning strategies. Concerning the availability of educational facilities, almost all school principals, vice principals and supervisors admit shortage of instructional materials, especially for practical activities, which may affect implementation of active learning; nevertheless, they assert that in the near future, they are on the way to solving those problems. The last question aimed at the school principals, vice principals and supervisors involved the major factors influencing the implementation of active learning strategies. Their responses were as follows; teachers' and students' attitudes towards active learning is not positive; large class sizes; text-book content is very broad (for instance history text-books), and the period is not balanced to cover the text throughout the academic year; lack of confidence and a knowledge gap for some teachers; lack of adequate training on teaching methodologies; and a shortage of instructional materials/recourses.

Discussion

A discussion of the results is supported by the review of literature that included the views of scholars and other research findings.

Perception of Teachers in Active Learning

Various research findings have confirmed a strong link between teachers' attitudes towards active learning and their efforts to implement it. Sguazzin and Graan (1999) showed that teachers' attitudes have significant influence on the effective implementation of Active Learning. In line with these ideas, twenty-four statements were included in the questionnaires with the intention of assessing teachers' knowledge or perception of Active Learning strategies. Hence, it appeared that almost all the teachers expressed agreement or strong agreement with the assumptions about active learning strategies raised in the questionnaires, and the overall mean is (3.95). This indicates that teachers have positive attitudes towards Active Learning strategies.

The level of their agreement with the assumptions of active learning shows us that the teachers perceive Active Learning positively. Nevertheless, their positive perception doesn't lead their using Active Learning strategies in their classroom. This was also obtained through interview.

Practice of Active Learning strategies

To assess the extent to which Active Learning strategies has been practically implemented in secondary schools, teachers reported via questionnaire and principals, vice principals and supervisors reacted through interviews. To validate the data, an observation checklist was also made. Accordingly, the teachers identified the frequency with which they implement Active Learning in their responses to the questionnaire. These data indicate that the teachers implement active learning strategies occasionally/sometimes in their classroom.

The most frequently practiced Active Learning strategy reported by the teachers was traditional lecture method. This method was employed widely because most probably, the teachers were familiar with the methods. However, these strategies can help to develop only lower levels of the cognitive domain. On the other hand, other active learning strategies related to a higher level of cognitive domain and believed to develop the critical thinking and problem-solving ability of the students were not widely practiced. Most of the teachers revealed that these strategies were employed rarely.

In their research, Chickening and Gamson, 1987 and Lue, 2000 noticed that students do not learn much just sitting in the class listening to teachers, memorizing packaged assignments and spitting out answers. They must talk about what they learn, write reflectively about it, relate it to past experience and apply it to their daily life. They must engage in solving problems. As with the previous one, role play, panel discussion, project work and problem solving had been practiced sometimes or not at all, in the schools' as shown in the finding.

Factors affecting the implementation of Active Learning strategies

In this study, shortage of time is among these factors. With respect to this problem, the teacher respondents agreed that the timetable was the third major problem negatively affecting the implementation of active learning strategies. Supporting this fact, Farant (1980) explains the effect of time. The author stresses that shortage of time limits these teachers and students in the implementation of active learning strategies in the classroom.

Capel et al. (1995), for example, explain some teachers even discourage active learning simply because it means an extra burden in planning, preparation and evaluation. They believe that active learning is problematized by limited time and over-crowed subject matter.

As a result, some even conclude that participatory, activity-based learning is best in theory but unrealistic in practice. This may arise from inadequate knowledge of the area and inappropriate utilization.

Major Findings of the study

Analysis of the data shows that almost all of the respondents in the study perceived active learning strategies positively. Moreover, the data indicated the following:

- The participants assert that when teachers use active learning, students learn more effectively and develop the ability to express their feelings confidently, while getting chance to reflect on the teaching and learning process.
- The teachers view active learning as playing an important role in developing self-confidence and independent learning among students.
- Peer teaching, cooperative learning, the project method, debating, the discovery method and problem-solving methods are all active learning strategies, but, they are seldom employed. Finally, field trips are not employed in secondary schools.
- Large class size is indicated as a major problem in implementing active learning strategies.
- Students' lack of interest in active learning is another dominant factor in implementing active learning.

Conclusions

The analysis of the data indicates that most participants in the study perceived active learning strategies positively. However, the degree of positivity varied from teacher to teacher. Moreover, it was indicated that the teachers felt certain that when they used active learning, students would learn more effectively develop the ability to express their feelings confidently and succeed in solving problems; they believe that active learning plays an important role in developing self-confidence and enhances the development of a sense of commitment. Thus, it can be concluded that the teachers perceived active learning strategies positively. The analysis of the data revealed that the extent of the practices of active learning in secondary school was low.

The teachers confirmed that they deployed active learning in their classrooms "sometimes", which leads to the conclusion that the usage of active learning was infrequent. On the other hand, the practices of active learning varied, as indicated in the analysis of the data.

Recommendations

- The stakeholders should be aware of the implementation of active leaning strategies in the classroom in collaboration with school principals, vice principals and supervisors.
- School principals should be equipped with the attitudes necessary to enable them to play a crucial role in facilitating the teaching/learning process in general and the implementation of active learning strategies, in particular.
- To enhance the effective implementation of active learning strategies, educational experts such as supervisors and principals should, provide well-organized training work-shops for teachers in each cluster.

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