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ATTITUDES AND IMPRESSIONS OF UPPER PRIMARY TEACHERS IN THE REPUBLIC OF CROATIA ABOUT ONLINE TEACHING DURING THE COVID-19 PANDEMIC – HOW DID WE DO IT?

Original scientific paper

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ABSTRACT

The transition to online teaching during the COVID-19 pandemic included almost all teachers and students. Digital (inadequate) skills and (in)competencies of both teachers and students have come to the fore. Accelerated adaptation, getting used to new forms of work, learning and teaching in these two years has introduced significant changes in the educational process and has shown the need to revise the educational system and the need for modernization and transformation. The study presents the results of a survey of a sample of 1,600 upper primary teachers in primary schools in the Republic of Croatia, which aimed to examine their attitudes and impressions regarding the implementation of online teaching during the pandemic COVID-19. The results of the research showed the following: The vast majority of respondents (94.1%) answered that the classic form of teaching is better than online teaching. Most of the respondents spent 2 to 4 hours in the preparation and evaluation of student materials.

Keywords: *teacher, teaching, digital technologies, digital competencies, online teaching*

INTRODUCTION

The COVID 19 pandemic has affected all spheres of human activity, including the educational system. For many students, teachers and parents, the transition to teaching that took place in a virtual space meant getting used to new situations and making "ad hoc" decisions. The classrooms "moved" to the virtual space and the classes were followed from home. For many, this was an extremely stressful situation, especially in the beginning, when it was necessary to organize uninterrupted work, adequate technological equipment and quality internet connection. For primary school students and especially parents who went to work, it was challenging to organize ways for their children to function independently at home, follow classes and perform necessary tasks and assignments, especially for those parents who are not digitally competent. However, the challenge was also for those teachers who were not interested in the implementation of new information and communication technologies in the educational process before the COVID-19 pandemic. Although the Ministry of Science and Education (MZO, 2020) provided guidelines for the organization of online classes and many instructions and recommendations (Instructions for evaluation and assessment during distance learning, recommendations on the organization of the student's working day, etc.), many students,

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teachers, headteachers and all persons who were directly and/or directly involved in the educational process literally faced the challenge of digital transformation, as the COVID-19 pandemic led to the questioning of several existing assumptions and habits. Among them, the role of teachers was questioned, as well as how teaching and learning are changing (Kucina Softic, Odak, Lasic Lazic, 2021, p. 141). One of the priority areas of every teacher should be lifelong learning and training. A research conducted by Kadum, Ruzic-Baf, Dumancic (2020) with higher education professors showed that they are aware that a lot of things need to be changed in teaching, but most of them still maintain the traditional way of working, "fleeing" from innovation and the use of information and communication technologies that contribute to the modernization of the teaching process. There are several reasons for this and some of the possible ones are: unknown effect of innovation changes, insufficient professional methodological training, while for some higher education teachers, one of the reasons for traditional methodological concepts are unsatisfactory material and technical conditions for more efficient higher education teaching, which makes the reform process even more difficult. Acquiring digital competencies and readiness for lifelong professional education and training should be one of the priorities of teachers to be able not only to accept the challenges of new digital technologies, but also to adequately use them.

DIGITAL COMPETENCIES AND DISTANCE LEARNING

The COVID pandemic contributed to the accelerated training of teachers and students, whether the institution organized education or whether they managed on their own.But what is the situation in EU countries in terms of digital competencies? According to DESI data (2021), the leading countries in the integration of digital technologies are Finland, Denmark and Sweden, while at the bottom of the scale are Bulgaria, Hungary and Romania. In 2019 (European Commission, 2020), a total of 56% of people in the EU had basic digital skills. A total of 80% of young people aged 16 to 24 and 33% of respondents aged 55 to 74 acquired basic and higher digital competences. As far as the student population is concerned, an interesting study was conducted by Shengen Visa (2020) and published in the annual Education and Training Monitor. In this study, more than 15% of the student population does not have sufficient digital skills and OECD data showed that upper primary teachers infrequently receive training on the use of information and communication technology (ICT) for teaching, so they also expressed the need for professional development in the use of ICT skills in their jobs. Specific teacher digital competences are listed within the competences as some of the core competences that teachers should have in approximately two thirds of European education systems (European Commission, 2020). Teachers should know how to integrate and effectively apply digital technologies in teaching and learning. The application of self-assessment tools to help teachers assess their own level of digital competence and thus define their own development needs is promoted in a total of 15 educational systems.

The Digital Education ActionPlan (2021-2027) seeks to:

- offer a long-term strategic vision for high-quality, inclusive and affordable European digital education
- address the challenges and opportunities of the COVID pandemic, during which technology in education and training has been used more than ever before
- strengthen EU-level cooperation in the field of digital education and emphasis
the importance of cross-sectoral cooperation in order to adapt education to the digital age
- create new opportunities, including better quality and offer of digital teaching technologies, support for the digitization of teaching methods and pedagogical methods and to provide the infrastructure needed for inclusive and functional distance learning.

Distance learning took place for almost two years, using various forms of learning that included the use of information and communication technology. Simovic and Ruzic-Baf (2013) state that electronic or virtual learning is a broader term that implies any form of education (and learning) with the help of information and communication technology (ICT) and (primarily network) IS and can be considered any educational (study) program that uses ICT and (primarily network) IS with the aim of realizing teaching / learning. The authors further believe that in recent years, electronic or virtual education includes a wide range of educational activities, with less consideration of infrastructure issues and much more ways of communication, cooperation, interactivity, mobility, quality of teaching content, service delivery, practice, etc. Distance learning includes all forms of teaching and learning where teachers/students are geographically separated. However, Katavic (2015) claims that online distance learning refers to a special online environment where teaching and learning takes place using computers/tablets as a medium for communication. Returning to school desks and returning to the "new normal"

involves the use of new digital technologies in the learning and teaching process. In most countries, distance learning has become part of standard education and is necessary in order to improve the quality of education using advanced information and communication technology (Katavic, Milojevic and Simunkovic, 2018) and the acquisition of digital skills and competencies. Online teaching has certainly left its mark not only on students but also on teachers and parents and all persons who were involved in the educational process, especially on students in the lower grades of primary school. Its advantages and disadvantages should be considered in the light of the students' and teachers' experiences on distance learning.

ADVANTAGES AND DISADVANTAGES OF DISTANCE LEARNING DURING THE COVID-19 PANDEMIC

Distance learning (Katic et al., 2021) has advantages and disadvantages. A study on a sample of 4,789 students aged 15 to 22 concluded that the disadvantages of distance learning include a lack of socialization, especially when it comes to inclusive activities such as practical classes, field trips, work in specialized classrooms and physical activity. The advantage of online teaching is that it is independent learning, which is its biggest advantage. Each user has the opportunity to choose where to study and how long the study will last. Teaching materials are always available and the user can always return and possibly skip the material and return to the same later, which actually contributes to the quality of the process and education (Zelic, 2016). However, students' opinions are divided. For example, Steimle et al (2022) conducted a survey among students at the Georgia Institute of Technology and found that a total of 47% of respondents would choose traditional teaching methods for lecture-based courses, and 60% of respondents would choose the same for laboratory teaching. Psychology students at the University of Australia (Kemp, Grieve, 2014) prefer live teaching over online teaching, although there was no significant difference in solving tests (exams) between the two teaching models In Delhi (Kamal & Illyan, 2021), teachers had on average positive experiences of virtual learning during a pandemic but stated that they encountered technical difficulties during online exams and assessments.Students (Zheng et al, 2021) of Dugoni School of Dentistry, University of the Pacific, 80% of 482 respondents, said they wanted to continue some form of online teaching after the pandemic and said one of the benefits of online teaching was greater flexibility it provides. The results of a survey (Digital promise, 2022) on a sample of 1498 respondents, parents and teachers showed that during the COVID-19 pandemic, a total of 43% of teachers taught exclusively online, while 39% of teachers used a hybrid form of teaching and 18% live classes. The majority of teachers (82%) said it was difficult for students to keep up with academic obligations during the pandemic, and two-thirds of teachers said their ability to fulfil individual learning needs of students deteriorated.

During the COVID-19 pandemic, most teachers held classes from their homes, and the time to prepare classes increased significantly compared to when classes were held live. Ziebel et al. (2020) in a survey of 1,200 Australian teachers found that almost the majority of students worked almost an extra day, and some worked more than 20 hours a week. Three-quarters of teachers surveyed expressed concern about distance learning because they felt it negatively affected students' emotional well-being. Teachers' attitudes (School Education Gateway, 2020) on online teaching and distance learning, on a sample of 4859 respondents, showed that 67% of respondents had their first experience of conducting online teaching during a pandemic. Among the most common difficulties (challenges) were access to technology (computers, software, stable Internet connection). A total of 43% of respondents said they felt increased workload and stress working from home.But the biggest challenge (43% of respondents) was to support students, maintain attention and motivation. A total of 17% of teachers believe that the school will be a little different and that online learning will become an integral part of teaching. During the COVID-19 pandemic in Croatian schools, classes were held according to three models: A model, B model and C model. Since the beginning of the Covid-19 pandemic, elementary school students have attended classes according to this model to a greater extent, except in situations where infection has occurred within the classroom (Ministry of Science and Education, 2020). It should be noted that the school could only be entered with a protective mask on the face and the classes were not allowed to "mix" during the breaks. The B model or mixed form of teaching implied that, depending on the epidemiological situation, part of the teaching took place at school and part at home, e.g. a week at school and a week online. (Ministry of Science and Education, 2020). The last option, model C, meant that during the pandemic, classes were conducted exclusively online.Various online learning platforms and many digital tools were

used during the pandemic. University of Bangladesh students (sample based on 438 respondents) most often used Zoom (79.70%), Google Meet (35.34%) and Google Classroom (43.61%) during the pandemic (Islam & Hossain, 2021).The following systems for conducting and organizing online classes (Carnet, 2020) were available in Croatian schools: *Loomen, MS Teams, Google Classroom, Yammer, etc., and systems for videoconferencing: Zoom, Adobe Connect, Big Blue Button, Google Meet* and others, as well as many digital tools designed for content creation (e-lab, 2020) such as *Book Creator, Kleki, Audacity, HP5, Geo Gebra, Puzzlemaker, Avogardo* and others. Given the really wide range of digital tools and systems for conducting online classes, one of the questions teachers asked themselves was how to help students learn at a a distance. Nelson et al. (2021) in a study of 1535 teachers in England concluded that one of the most effective ways for teachers to help studentslearn at a distance is to actively teach them and to apply similar pedagogical principles to those used during live teaching. What is the opinion of upper primary teachers in Croatian schools in terms of online teaching compared to traditional teaching, we have shown in the following study.

METHODOLOGY

Research questions

This research sought to examine the attitudes of upper primary teachers in primary schools regarding the teaching they conducted online during the COVID-19 pandemic. This research sought to examine the attitudes of subject teachers in primary schools regarding the teaching they conducted online during the COVID-19 pandemic. The following research tasks arose from the goal thus defined:- to examine whether they consider online teaching to be better than traditional teaching,
- to examine how much time teachers spend evaluating students and preparing materials,
- to examine whether they consider that they have at their disposal satisfactory teaching equipment,
- to examine whether there is a difference in the activity of students online and in the classroom,
- to examine which system they use to conduct online classes,
- to examine whether they feel that the quality of teaching differs from teacher to teacher.

Content analysis, participants

The research used a questionnaire designed specifically for the purposes of this research. It consisted of two independent variables and ten variables related to online teaching. Of these, one variable was based on multiple choice, one open-ended, three with offered answers and five variables based on the Likert-type assessment scale, where test participants opted for one of the offered answers. The questionnaire consisted of the following variables:

Independent variables:
V1 Gender,
V2 Years of work experience;

Dependent variables:
V3 The online way of teaching is better than the classic way of teaching
V4 How much time, on average, do they spend at the computer preparing materials or evaluating their students
V5 Satisfaction with online teaching
V6 The equipment they have to use for online teaching is satisfactory
V7 Student activity during online classes is better than in school classes.
V8 Coping in online teaching is greater than expected.
V9 Applications used to conduct online classes
V10 An additional application you are using, but we have not listed it
V11 Realized online teaching varies from teacher to teacher
V12 Desire to return to the classic way of working (in class, without a mask).

For the purposes of the research, a questionnaire was compiled on a Google form. It was divided into Facebook groups for upper primary teachers throughout the Republic of Croatia. Before posting in the Facebook group, we waited for the review and approval of the administrator. It should be emphasized that terms that have a gender meaning, regardless of whether they are used in the feminine or masculine gender, equally include the feminine and masculine genders. During the research, the code of ethics was fully respected: respondents were given written instructions on how to fill out the questionnaire, the possibility of giving up further answers, explained that the data will be used exclusively for scientific purposes and most importantly guaranteed anonymity. Data were processed using the IBM SPSS 24.0 Standard Campus Edition statisti-cal package (SPSS ID: 729357 20. 5. 2016). The research was conducted on a sample of 1,600 upper primary teachers in the Republic of Croatia. With regard to gender, 94.0% of research participants, or 1504 of them, are female, while 6.0%, or 96 of them, are male.

With regard to the length of service in the educational activity, we obtained the results shown in Table I. Most respondents (27.6%) have work experience of 5 to 12 years, while 3.8% have more than 33 years of work experience.

Table 1. Characteristics of the sample with regard to work experience in educational instutuition

	Years of work experience	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 5 years	341	21.3	21.3	21.3
	from 5 to 12	441	27.6	27.6	48.9
	more than 12, but less than 20	354	22.1	22.1	71.0
	more than 20, but less than 26	240	15.0	15.0	86.0
	more than 26, but less than 33	163	10.2	10.2	96.2
	more than 33	61	3.8	3.8	100.0
	Total	1600	100.0	100.0	

RESULTS

The COVID pandemic, which found most educators unprepared, "demanded" from them to first learn to use a particular application and then prepare materials adapted for online teaching. In the research conducted by Kadum, Ruzic-Baf and Farkas (2021), the obtained results showed how much primary school teachers in the Republic of Croatia spend on the preparation of didactic material and evaluation of student work.

On a sample of 329 respondents, 41.0% spent 4 to 6 hours preparing materials and evaluating student work; 36.5% of them spend less than 4 hours, while 8.8% of respondents spend the most time, more than 8 hours, on these jobs. Therefore, we were interested in the same data, but for upper primary teachers, i.e. how many hours they spend on average working on a computer preparing materials and evaluating student work.

In Table II, we present the obtained results; it can be seen that the largest number of research participants spend from 2 to 4 hours in the preparation and evaluation of student materials, while 16.1% spend more than 8 hours a day. 5.9% of respondents spend less than 2 hours.

Table 2. Time spent preparing didactic material and / or evaluating student's works

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 2 hours	95	5.9	5.9	5.9
	more than 2, but less than 4 hours	471	29.4	29.4	35.4
	more than 4, but less than 6 hours	464	29.0	29.0	64.4
	more than 6 hours, but less than 8 hours	312	19.5	19.5	83.9
	more than 8 hours	258	16.1	16.1	100.0
	Total	1600	100.0	100.0	

Software Testing Help (2021) conducted a survey to determine the top fifteen e-learning applications in 2020. The obtained results show that the best e-learning applications include Mindflash, SkyPrep, Knowmax, TalentLMS, Docebo, Moodle, Litmos, Ispring, Canvas, Edmodo, Blackboard, Joomla LMS, Brightspace, Absorb LMS, Schoology, eFront, Adobe Captivate Prime LMS. However, in our research we opted for the following e-learning systems: Microsoft Teams, Microsoft Yammer, Edmodo, Loomen, Zoom, Skype, e- mail. It should be emphasized that the research participants were given the possibility of multiple choices. The obtained results are shown in Graph 1, which shows that 72% of respondents use Microsoft Teams, and the least of them, only 3%, use Skype.

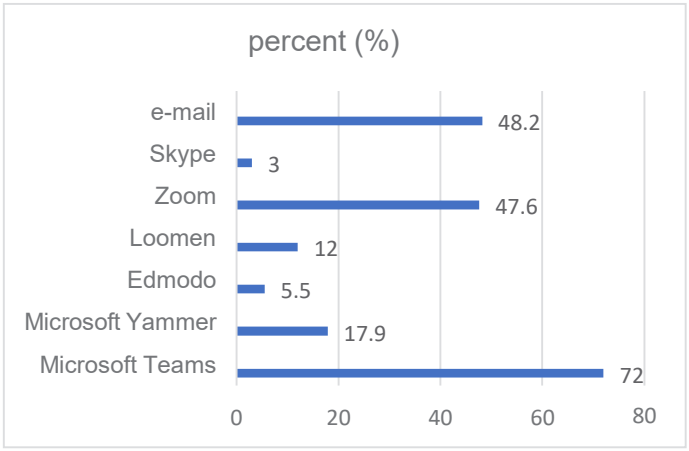

Figure 1: Applications used in online teaching

In addition to this question, we gave the respondents the opportunity to indicate if there is another application that they use to hold online classes that was not mentioned in the previous question. A total of 537 respondents answered that question, with some stating that they use more applications. Respondents answered that in addition to the offer, they also use applications shown in Graph 3. It can be seen that most respondents have chosen to use Google Classroom (209), and the least Edulastic, Testmoz, BigBlueButton, Merlin, Matific, Zoom, Book Widget, Loops, Whiteboard, Trello (1).

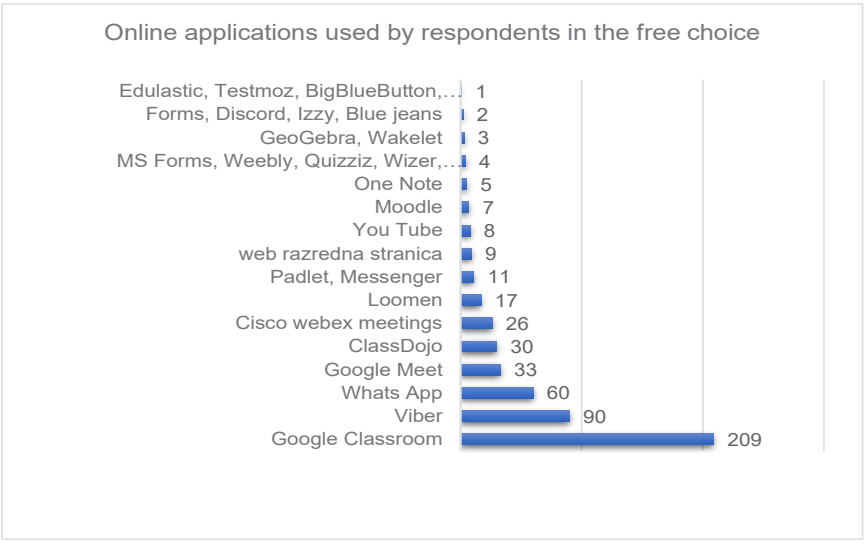

Figure 2: Online applications still used by respondents

We asked our respondents if they were satisfied with how they coped with teaching online and we got the values M = 3.63, SD = .813. Furthermore, according to the obtained results, they are aware of the fact that the realization of online teaching varies from teacher to teacher (M = 4.58, SD = .770). One of the problems of online teaching was the inactivity of students, which was confirmed by our respondents (M = 2.14, SD = .978).The data are shown in Table III.

Table 3. Descriptive statistics of statements

	N	Min.	Max.	Mean	Std. Deviation
... I am satisfied with how I coped with online teaching	1600	1	5	3.63	.813
... the equipment I have at my disposal for online teaching is satisfactory	1600	1	5	3.82	.971
... students are more active in online teaching than in class / school	1600	1	5	2.14	.978
... in online classes I did better than I expected	1600	1	5	3.99	.851
... the quality of online teaching varies from teacher to teacher	1600	1	5	4.58	.770
Valid N (listwise)	1600				

The next two statements shown in Table IV for which we sought an answer were whether they agreed that the online way of teaching was better than the classic way and whether they wanted to return to the classic way as soon as possible. For the first statement whether the online way of working is better than the classic way of working 94% of respondents think that the classic way of teaching is better, for 17% of respondents online teaching is better, while 4.9% of respondents opted for the option "it's the same to me". For the second statement whether they want to return to the classic way of working as soon as possible (in class, without a mask), we found that 91.2% of respondents agree with the statement. 0.3% or 4 respondents did not answer this statement.

Table 4. Values of descriptive statistics for variables the online way of teaching is better than the classic way and I want to return to the classic way as soon as possible (in class, without a mask)

Statements		***f***	***%***	**M**	**SD**
V3 The online way of teaching is better than the classic way.	yes	17	1.1	2.04	.241
	no	1505	94.0		
	it is the same to me	78	4.9		
	did not answer	0	0.0		
V12 I want to return to the classic way as soon as possible (in class, without a mask).	yes	1461	91.2	1.15	.501
	no	35	2.2		
	it is the same to me	100	6.3		
	did not answer	4	.3		

Furthermore, we were interested in the relationship between the variables (V3) *The online way of teaching is better than the classic way* and (V12) *I want to return to the classic way as soon as possible (in class, without a mask)*. It can be seen from Table V that the significance for both variables is p = .000 < .01. The correlation between V3 and V1 is r = .444, and given the range of coefficients, according to Evans (1996), the correlation is moderate.

Table 5. Correlation matrix for variables the online way of teaching is better than the classic way and I want to return to the classic mode as soon as possible (in class, without a mask)

Statements		**V3**	**V12**
V3 The online way of teaching is better than the classic way.	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	1600	
V12 I want to return to the classic way as soon as possible (in class, without a mask).	Pearson Correlation	.444**	1
	Sig. (2-tailed)	.000	
	N	1596	1596

**. Correlation is significant at the .01 level (2-tailed).

We were also interested in the relationship between the variables (V3) *the online way of teaching is better than the classic way* and (V5) *I am satisfied how I coped with online teaching* and (V8) *in online teaching, I did better than I expected.* It can be seen from Table VI that the significance for all three mentioned variables is p = .000 < .01. The correlation between V3 and V5 is r = .110, and given the range of coefficients, according to Evans (1996), the correlation is low; V3 and V8 are r = .090 connection is also low. The correlation between variables V5 and V8 is r = .433 and given the range of coefficients the correlation is moderate.

Table 6. Correlation matrix for variables the online way of teaching is better than the classic way

Statements		**V3**	**V5**	**V8**
V. The online way of teaching is better than the classic way.	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	1600		
V5 I am satisfied how I coped with online teaching.	Pearson Correlation	.110**	1	
	Sig. (2-tailed)	.000		
	N	1600	1600	
V8 In online teaching, I did better than I expected.	Pearson Correlation	.090**	.433**	1
	Sig. (2-tailed)	.000	.000	
	N	1600	1600	1600

**. Correlation is significant at the .01 level (2-tailed).

CONCLUSION

The attitudes of upper primary teachers in Croatia towards online teaching during the COVID pandemic have shown that they have faced many challenges. One of the challenges was the inactivity of students, with which more than half of the respondents (63.2%) agreed, while 6.7% of respondents stated they thought otherwise. This could be explained by the fact that the transition to online teaching took place in a very short time, literally "overnight", and some students and teachers were unprepared and/or perhaps insufficiently trained in terms of digital literacy for teaching in a virtual environment. Furthermore, students were not accustomed to this form of teaching and communication, which was confirmed in the research by Van der Graff et al (2021) stating that in addition to the unwillingness of teachers for digital education, there was a lack of appropriate pedagogical and digital skills and that the age of students and their ability to learn independently should be considered. Satisfaction with the realized online teaching was expressed by 58.4% of respondents, while 6.5% of respondents disagree or completely disagree with this statement. A survey conducted in Indonesia (Hermanto, 2020) on a sample of 71 teachers showed that more than half of the respondents (52.1%) did not have a problem with online teaching and 22.5% agree and 16.9% fully agrees with the statement that online learning should be implemented in a conventional way after the end of the COVID pandemic. The equipment available to teachers and students in primary schools in Croatia was satisfactory, with 66.8% of respondents agreeing, while a total of 9.1% were dissatisfied with the equipment. The quality of online teaching varies from teacher to teacher was the next thing we asked our respondents. 89.2% of them agree or completely agree with the statement, where as 2% of them disagree or completely disagree. 8.8% of them are undecided. 72.1% of respondents agree or completely agree with the statement "I did better in online classes than I expected", while 3.1% of respondents disagree or completely disagree. Researchers Karalar & Sidekli (2021) concluded in their research that teachers' attitudes towards online teaching in Turkey were negative and that distance learning provided limited teaching experience during the COVID-19 pandemic.When asked which way of teaching is better, online or classic, the majority of respondents(94.1%) answered that it is a classic way, while 4.9% of respondents said that it was the same for them, and 1.1% that it is online the way of teaching is better. The last statement offered to our respondents was whether they want to return to the classic way of working (in class, without a mask), and of our respondents a total of 91.3% want to return while 6.3% of respondents opted for the answer "It is the same to me". It should be noted that a total of 4 respondents or 0.3% did not answer this question, and 6.3% of respondents do not want to return to the "old" way of teaching, i.e. prefer online teaching. Wang et al. (2020) concluded a survey in which 77.9% of teachers in China out of 1450 respondents said they would like to continue using online learning platforms to help classroom teaching.

The obtained research results showed in the end that upper primary teachers prefer to hold live classes, i.e. in the classroom. Classic teaching after the pandemic will no longer be or is the same. The need for integration and implementation of digital technologies has become inevitable, which will transform the educational process in accordance with the times we live in and the needs of individuals, primarily students, who need adequate preparation for a safe and purposeful (co) life in the digital society. A Greek proverb says that history repeats itself. The former departure of students to school with chalk, sponge and small board can be replaced by going to school with smaller and smaller electronic devices, and maybe even going to school without anything. Heavy school bags full of books are becoming a thing of the past, and in the future only one "electronic book" will be carried, just as schoolchildren used to carry a chalk board to school. (Miksa, 2011). But what should definitely remain irreplaceable and what should be nurtured in students is the living word, face-to-face communication in real time and space and the warmth of togetherness, because technology should allow us greater automation to have more free time to spend in live words, socializing, etc.

Limitations

The research was done in order to determine the impressions and examine the attitudes of teachers about the implementation of online teaching during the pandemic. Implications for further research may relate to more detailed reasons why the classic way of teaching is better than online teaching, but the opposite should also be considered. It is necessary to consider how to motivate students for online teaching and why the quality of online teaching

differed from teacher to teacher, whether it was the level of digital competencies and skills, previous education for digital skills development and acquisition of necessary competencies, selection of digital tools, knowledge of a foreign language (if the tools were offered in a foreign language and not Croatian), whether the choice of digital tools was appropriate for the subject they teach, etc.

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THE USAGE AND UNDERSTANDING OF ANGLICISMS BY BOSNIAN EFL USERS

Original scientific paper

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ABSTRACT

This study aimed to explore the use of nominal and verbal Anglicisms by Bosnian high school students, the students' familiarity with these Anglicisms and their attitudes towards them and it also aimed to see whether these factors vary with respect to the frequency of students' use of English in speaking, listening, reading and writing. The findings point to a very frequent use of Anglicisms among Bosnian participants, particularly verbal Anglicisms which tended to be significantly more frequently employed than nominal Anglicisms, and slightly greater familiarity with the English form rather than with the Bosnian equivalent form. Moreover, the frequency of the use of Anglicisms was related to the frequency of reading and writing in English, while the familiarity with the Bosnian equivalent was significantly related to speaking and reading and familiarity with the English equivalent form to all four aspects of English language use. The participants also expressed rather positive attitudes towards Anglicisms, perceiving them as a useful addition and not a serious threat to their native language.

***Keywords**: borrowing, loan words, Anglicisms, attitudes, high school.*

INTRODUCTION

Identified as the most common type of contact-induced change (Thomason, 2001, p. 10), borrowing is "the process of importing linguistic items from one linguistic system into another" (Hoffer, 2002, p. 1) and entails transfer of linguistic features from the donor or source into the recipient language (Haspelmath, 2009, p. 37; Myers-Scotton, 2006, p. 211). Besides referring to the process, borrowing also designates the form and/or the meaning of the borrowed lexical item itself or a loan (Fischer & Pulaczewska, 2008, p. 6; Haspelmath, 2009, p. 38). However, there is a lack of consensus among linguists on the borrowing terminology and typology (Pulcini et al., 2012, p. 5) so lexical borrowings are used interchangeably with loanwords by some authors (Fischer & Pulaczewska, 2008; Myers-Scotton, 2006; Thomason & Kaufman, 1998), while the latter are classified as a subtype of the former by others (Pulcini et al., 2012). In line with this, various classifications of lexical borrowings have been proposed (Haspelmath, 2009; Winford, 2005) but the most prominent one is the classification along the direct-indirect split (Pulcini et al., 2012), which will be foregrounded in the current research. Thus, Pulcini et al. (2012), classify lexical borrowings into *direct* borrowings, which bear formal resemblance to the source language and encompass loanwords, false loans, and hybrid loans, and indirect borrowings,

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which include calques and semantic loans and do not overtly and evidently reveal the presence of the source language, because the form from the source language is reflected in the already existing word in the recipient language (Pulcini et al., pp. 5-6). Nowadays, the English language (EL) assumes the role of the dominant source language due to its increased popularity as an international language (Crystal, 2003). A large number of words are transferred from this globally-acknowledged source language into other recipient languages worldwide as a result of constant and continuous language contact. Language contact between English and Bosnian has also been maintained both institutionally through formal education and non-institutionally via media, movies, music, and the entertainment industry in general, etc. for over half the century and it has induced changes particularly in the domain of lexis and has led to a direct adoption of a large number of English words into Bosnian (Ajsic, 2014; Dubravac & Skopljak, 2020; Skopljak & Dubravac, 2019; etc.). In terms of institutional learning, English is present in our elementary and high schools as well as higher education institutions approximately for two teaching hours a week. However, outside school, students tend to be extensively exposed to it (Dubravac et al., 2018; Dubravac, 2016; Ribo & Dubravac, 2021), and they also use it quite often for various purposes, either as a link language or symbolically as a marker of status or even as an identity construction tool (Dubravac & Skopljak, 2020). It is exactly this nonformal English use that is widely believed to significantly affect their knowledge and understandings of Anglicisms. While a few previous enquiries analysed the presence of Anglicisms in the Bosnian context, exploring its variability with respect to different genres (Dubravac, 2016), different age groups (Dubravac, 2016; Skopljak & Dubravac, 2019), further studies are needed to provide the overall picture of their use in this context. Thus, the current study aims to fill this gap, adding to general research on contact-induced changes triggered by close language contact.

Anglicisms and their adaptation

A borrowing from English, today's leading donor language (Myers-Scotton, 2006, p. 212), is referred to as an Anglicism. A widely accepted definition of an Anglicism, based solely on its formal aspect, is that it is "a word or idiom that is recognizably English in its form (spelling, pronunciation, morphology, or at least one of the three), but is accepted as an item in the vocabulary of the receptor language" (Görlach, 1994, p. 224). However, due to its restrictive nature and inability to explain all other English forms featuring through calquing and adaptation (Pulcini et al., 2012, p. 5), a broader, all-encompassing definition was proposed by Gottlieb (2005, 2012) identifying an Anglicism as "any individual or systematic language feature adopted or adapted from English, or inspired or boosted by English models, used in intralingual communication in a language other than English" (Gottlieb, 2005, p. 163; 2012, p. 175). Within the theory of languages in contact (Filipovic, 1978), an English form passes through four different stages before it becomes a rightful Anglicism, i.e., orthographic, phonological, morphological and semantic. Within orthographic adaptation, Anglicisms can be formed based on the pronunciation of the original English word (e.g., Bos. lajkati / Eng. like), based on the orthography of the original English word (e.g., Bos. gasolin and laptop / Eng. gasoline and laptop), by the combination of pronunciation and orthography of an English word (e.g., Bos. kampus and intervju / Eng. campus and interview) or through an intermediary language, as in štrajk, the translation of the English word strike, which shows the traces of German pronunciation (Filipovic & Menac, 1997, pp. 64-69). Adaptation on the phonological level is referred to as transphonemization, and can be complete (i.e., the phonemes from the English language match the phonemes from the recipients' language as in Bos. tim and dres / Eng. team and dress), partial (i.e., the phonemes only partially correspond to each other, as in Bos. džem and puding / Eng. jam and pudding) and free transphonemization, which occurs freely and encompasses those morphemes which do not have articulatory equivalents in the recipient language (as in Bos. pidžama and flert / Eng. pyjamas and flirt) (Filipovic, 1978, pp. 100-104). Adaptation on the morphological level is referred to as transmorphemization or morpheme substitution, and can be zero, partial/compromise or complete, depending on whether the recipient language accepts the English word without any changes (as in Bos. bridž and skaut / Eng. bridge and scout), whether a loan retains an English morpheme that does not conform to the recipient language's morphological system (as in Bos. farmer and trening / Eng. farmer and training), and whether the English morpheme that does not conform to the recipient language's morphological system is replaced by the bound morpheme from the recipient language with the identical function (as

in Bos. štrajkač and analitičar / Eng. striker and analyst), (Filipovic, 1980, pp. 2-7).

Adaptation on the semantic level can include either zero semantic change, i.e., the meaning is simply transported from English into the recipient language, as in Bos. džin and biftek vs. Eng. gin and beefsteak, semantic restriction, i.e., one meaning out of a larger number of meanings in the English language is transported into the recipient language as in Bos. šampion /Eng. champion, only the meaning 'a person who has beaten all the other competitors in the competition' has been transported, or semantic extension, i.e., the meaning expands because the word is used in a specific context within the recipient language as in Bos. najlon / Eng. nylon, where the meaning of nylon as the material has been expanded to a few other meanings, such as plastic and plastic bag (Filipovic & Menac, 1997, pp. 88-89). These different ways and forms of adaptation sometimes produce multiple forms of one English form and it has to be decided which form to use. When this happens, two different criteria can be applied, namely the level of adaptation the Anglicism has undergone and its frequency of usage (Filipovic, 1990).

Previous studies

Due to the 'global inevitability' of English (Osterhammel & Petersson, 2005, p. 107) and its unprecedented spread, Anglicisms are widely present in many European languages (Görlach, 2002) and they have been extensively researched (see Lackova et al., 2019 for Russian, Polok, 2017 for Polish, Barbe, 2012; Knospe, 2007; Mesaros, 2015; Onysko, 2004 and others for German, and Cocu, 2019; Wang & Yuan, 2020 for Romanian languages). They have also attracted scholarly attention in Bosnia and Herzegovina and the surrounding countries Croatia and Serbia and their presence in Bosnian, Croatian and Serbian has been frequently researched, though more extensively in the latter two than in the former one. Croatian is largely impacted by English and has adopted a large number of Anglicisms despite some steps taken to 'protect' it from foreign influence (Silaski, 2009). In-depth research has thus confirmed a large presence of English loanwords in that language (Bojcic & Braovic-Plavsa, 2012; Jardas-Duvnjak, 2019; Peric & Skific, 2015), particularly nouns (Bojcic & Braovic-Plavsa, 2012), but also pointed out that English vocabulary is rather a matter of choice than a necessity and that Anglicisms in Croatian are adopted for the purpose of prestige (Peric & Skific, 2015). Still, the need to reduce the number of English words in the media is frequently addressed, since, in many cases, Anglicisms can be easily replaced by appropriate expressions from the Croatian language.

Similar voices have been heard in Serbia. Thus, Misic-Ilic (2014) questions the justification for the usage of Anglicisms especially when there are Serbian equivalents, and Palavestra (2011) analyses the use of Anglicisms by Serbian youth and concludes that, even though young people show a degree of creativity in using Anglicisms and frequently employ new lexis to pass on their message in a more believable manner, there is a real threat that their native language competence will decline especially in the domain of vocabulary. Tomic (2018) points to a large number of Anglicisms in computer sciences and entertainment but justifies their presence by the need to fill a lexical gap, and maintains that language users should always consider the possibility of expressing new adopted English words using words from their own mother tongue's inventory (p. 84). The presence of Anglicisms has been also confirmed in different registers in the Bosnian language (Sehovic, 2009) due to a permanent presence of English in this sociocultural context (Brdarevic-Celjo, Ahmetovic & Bajic, 2021; Brdarevic-Celjo, Becirovic & Dubravac, 2021; Brdarevic-Celjo et al., 2018; Brdarevic-Celjo & Dubravac, 2022; Kovacevic et al., 2018; Ogric-Kevric & Dubravac, 2017; Skopljak & Dubravac, 2019), but they have not been exhaustively researched. Ajsic (2014) researched the use of Anglicisms in the political discourse and noticed a large inflow of words related to politics and government, followed by economics and business, science and technology and the media, while Dubravac (2016) noticed that borrowings are more frequent in show business, fashion and advertisements than in sports and politics. The widespread opinion is that Anglicisms enrich Bosnian and should not be avoided, but their behaviour and adaptation should be carefully monitored. This was confirmed through practical exploration of Bosnian speakers' preferences, which showed that the Bosnian respondents more frequently select native Bosnian expressions followed by foreign English words, with variation observed in terms of age and younger participants demonstrating stronger preference for English words than the older ones (Dubravac, 2016). Attitudes towards Anglicisms have also been ambivalent, with some language users claiming that a language is an identification of a person's social,

national or regional background and, as such, should be protected from the outer sources, and others accentuating a language's communicational role, claiming that new words from other languages, especially English, are more than welcome. A conciliatory view in-between the two opposing views is the one in which Anglicisms are observed only as "a means of communication and not of identification" (Fischer & Pulaczewska, 2008, p. 5) and many authors thus believe that the influx need not be controlled or forbidden, but that there should be clear guidelines as to how to adapt borrowings to a native language to ease their use and understanding (Dubravac, 2016; Sehovic, 2009). The participants in the current study are younger generations, shown to be more prone to following new trends and using Anglicisms in their everyday speech. The study will show how often they use them, whether they prefer nominal or verbal ones, whether they are familiar with the forms of English equivalents and their native Bosnian equivalents, as well as whether they share positive stances towards their use. Moreover, the research takes into account the frequency of nonformal use of and exposure to English, so it analyses the variability in the aforementioned tendencies based on how often the participants speak and write in English, read in it or listen to it. Out-of-school exposure has been confirmed as significant for the overall language learning process (Ellis, 2002; Teng, 2015), and in particular for vocabulary learning (Peters, 2018; Peters & Webb, 2018; Webb, 2015). However, there are no indications showing how it affects the use and understanding of Anglicisms in an EFL context, and whether out-of-school exposure through reading and listening makes the same effect as exposure through speaking and writing.

Therefore, the current study attempts to contribute to our understanding of the issue through the set of following research questions:
RQ 1 Is there a difference in the participants' use of common nominal and verbal Anglicisms?
RQ 2 Does the participants' use of common Anglicisms vary with respect to the frequency of the use of English in speaking, listening, reading and writing?
RQ 3 Are the participants familiar with the equivalent English form of Anglicisms and their native Bosnian equivalents?
RQ 4 Does the participants' familiarity with equivalent English form of Anglicisms and their Bosnian equivalents vary with respect to the frequency of the use of English in speaking, listening, reading and writing?
RQ 5 Do the participants share positive attitudes towards the use of Anglicisms?
RQ 6 Do the participants' attitudes towards Anglicisms vary with respect to the frequency of the use of English in speaking, listening, reading and writing?

METHOD

Participants

101 Bosnian high school students at four different grade levels participated in this research, 51 female participants (50.5%) and 50 male participants (49.5%). 30 participants (29.7%) attended the first grade, 15 participants (14.9%) attended the second grade, while 26 (25.7%) and 30 participants (29.7%) attended the third and the fourth grade respectively. Table 1 displays the relevant data about the participants.

Table 1. Descriptive information about the participants

		N	%				N	%
Gender	Male	50	49.5	Average course grade	1	Negative	1	1.0
	Female	51	50.5		2	Sufficient	6	5.9
Grade	First	30	29.7		3	Good	17	16.8
	Second	15	14.9		4	very good	16	15.8
	Third	26	25.7		5	Excellent	61	60.4
	Fourth	30	29.7					
Total		101	100					

Data collection instrument

The data used for the purpose of this study were collected by means of a questionnaire developed by the researchers. The questionnaire was in the Bosnian language and it was distributed to the participants as such. Besides the introductory demographic part asking for the participants' class, gender and average English course grade, the questionnaire consisted of five additional parts. The first part contained questions about the frequency of Anglicism use, where the participants were asked to indicate how frequently they use the provided Anglicisms on a three-point Likert scale (always, sometimes or never). The Anglicisms included in the questionnaire emerged from the careful analysis of 30 issues of daily newspapers and popular magazines available online, such as Avaz and Oslobodjenje, as well as news portals, such as Klix, within the period of one month. These newspapers and news websites are frequently attended by younger population due to the fact that they cover a wide array of current topics, ranging from politics and art to sports and entertainment, and target a different readership. The language was analysed manually and 46 Anglicisms fully adapted to the Bosnian orthography were extracted. Those Anglicisms were classified into the ones for which the appropriate Bosnian equivalents exist and those whose Bosnian equivalents have similar but not the same meaning. The second part consisted of questions measuring the frequency of English language usage in general, its usage in writing, reading, listening and speaking as well as the frequency of the usage of Anglicisms on a four-point scale ranging from rarely to always. The third part of the questionnaire contained questions measuring the participants' attitudes towards learning English and specifically, towards Anglicism usage, on a 5-point Likert scale ranging from strongly agree to strongly disagree. In the two final parts of the questionnaire, the participants were asked to provide the English word equivalent to the given Anglicism as well as the orig inal, not borrowed, Bosnian equivalent (if it exists). To investigate the validity of the questionnaire, the expert judgments approach was employed and three doctoral degree holders in teaching English as a foreign language (TEFL) and two master's degree holders majoring in psychology and social sciences were consulted and they gave some useful suggestions and contributed to the development of the questionnaire. The questionnaire was then distributed to the participants in a printed form and they were given sufficient time to complete it.

Data analysis techniques

The collected data were analysed by using Statistical Package for Social Sciences (SPSS, v. 26). Frequencies and means were computed to ascertain the types and frequencies of the participants' usage of Anglicisms. Moreover, a one-way ANOVA and an independent samples T-test were used to examine some differences in their usage between the study groups.

RESULTS

The use of nominal vs. verbal Anglicisms
The study firstly investigated whether there were any differences in the participants' use of nominal and verbal Anglicisms. The overall analysis of both nominal and verbal Anglicisms pointed to their fairly frequent usage ($M = 2.41$, $SD = .26$), with verbal Anglicisms ($M = 2.56$, $SD = .27$) being more frequently used than the nominal ones ($M = 2.24$, $SD = .30$). A paired samples t-test was conducted to check whether that difference was significant and the results revealed that the participants significantly differed in their usage of nominal and verbal Anglicisms $t(100) = 13.75$, $p = .000$. Furthermore, a detailed descriptive data analysis was conducted to determine to what extent the participants used each nominal and verbal Anglicism in their everyday speech on the scale from 1 'never' to 3 'always'. The representation of the descriptive data analysis of the usage of nominal and verbal Anglicisms is presented in Table 2 below.

Table 2. Analysis of the frequency of usage of nominal and verbal Anglicisms

NOMINAL ANGLICISMS					
	M	*SD*		*M*	*SD*
OFIS (*office*)	1.45	.57	SIN (*seen*)	2.60	.61
EIRKONDIŠN (*air-condition*)	1.37	.56	SNAJPER (*sniper*)	2.31	.68
MITING (*meeting*)	1.74	.70	SKEČ (*sketch*)	2.42	.65
FARMA (*farm*)	2.45	.71	TINEJDŽER (*teenager*)	2.85	.41
SNOUBORD (*snowboard*)	2.06	.79	TREND (*trend*)	2.87	.33
KOKTEL (*cocktail*)	2.21	.73	RIALITIŠOU (*reality show*)	2.64	.55
HEPIEND (*happy end*)	2.03	.69	ŠOPINGCENTAR (*shopping center*)	2.90	.33
FERPLEJ (*fair play*)	2.37	.75	IMIDŽ (*image*)	2.32	.74
VATERPOLO (*water polo*)	2.15	.78	MENADŽER (*manager*)	2.64	.52
OFSAJD (*off side*)	2.59	.58	IVENT (*event*)	1.78	.74
BESTSELER (*bestseller*)	1.96	.78	FEŠNVIK (*fashion week*)	1.58	.65
VERBAL ANGLICISMS					
	M	*SD*		*M*	*SD*
DAUNLOUDOVATI (*to download*)	2.50	.62	GUGLATI (*to search on Google*)	2.73	.58
SURFATI (*to surf*)	2.41	.71	BUKIRATI (*to book*)	1.77	.67
ŠEROVATI (*to share*)	2.59	1.06	INTERVJUISATI (*to interview*)	2.50	.65
KOMBINOVATI (*to combine*)	2.85	.35	DIZAJNIRATI (*to design*)	2.66	.58
LAJKATI (*to like*)	2.93	.25	BLEFIRATI (*to bluff*)	2.37	.65
TRENIRATI (*to train*)	2.88	.38	PARKIRATI (*to park*)	2.81	.44
SPELOVATI (*to spell*)	2.53	.57	INVESTIRATI (*to invest*)	2.48	.65
NOKAUTIRATI (*to knock out*)	2.52	.64	MANIPULISATI (*to manipulate*)	2.57	.60
SPRINTATI (*to sprint*)	2.23	.67	VOLONTIRATI (*to volunteer*)	2.60	.60
ŠUTATI (*to shoot (a ball)*)	2.84	.39	FOTOGRAFISATI (*to photograph/ to take a photo*)	2.91	.28
MIKSATI (*to mix*)	2.63	.54	TAGOVATI (*to tag/mark*)	2.66	.53

The overall analysis shows a discrepancy in the participants' use of Anglicisms, with some words exhibiting a frequent usage (such as Bos. lajkati/ Eng. like, Bos. parkirati/ Eng. to park etc.) and some a rather low usage (such as Bos. eir kondišn/ Eng. air condition and Bos. ofis/ Eng. office). Thus, the verb lajkati/ like seems to be most frequently used (M = 2.93, SD = .25), with 94 participants reporting that they always use it and only 7 participants that they sometimes use it.

The results for the word Bos. fotografisati/ Eng. to photograph/take a photo (M = 2.91, SD = .28) closely resemble the results for the previously mentioned Anglicism, with 92 participants reporting to use it all the time and 8 of them sometimes, as well as Bos. šoping centar/ Eng. shopping center (M = 2.90, SD = .33) reported by 92 participants to be used all of the time, and by 8 participants to be used only sometimes, with one participant even reporting an absence of usage.

Rather interestingly, the word Bos. eirkondišn/ Eng. aircondition (M = 1.37, SD = .56) was used the least frequently, with 51 participants reporting that they never use it, 41 of them that they use it sometimes and 9 of them that they always use it, as well as the word Bos. ofis/ Eng. office (M = 1.45, SD = .57), and Bos. fešnvik/ Eng. fashion week (M = 1.58, SD = .65), with 59 participants reporting no usage of these two words at all, 37 of them reporting occasional usage and only 4 participants stating that they always use them. Also, the analysis whether the frequency of Anglicism use varied with respect to the frequency of speaking, listening, reading and writing in English was obtained. The data displayed in Table 3 indicate that our participants most frequently use English in speaking and writing, 63 claiming they often or always use it in speaking, and 65 in writing. Fewer participants (N = 22) tend to read in English often or always, and 57 of them tend to listen to English often or always.

However, reading ($F(3, 97)= 2.773$, $p = .046$) and writing ($F(3,97) = 2.920$, $p = .038$) in English seem to make a significant change in the use of Anglicisms. In fact, a post hoc test showed that in terms of reading in English a significant difference in the use of Anglicisms existed between those reading rarely and often ($p = .007$), whereas with respect to writing, significant differences were found between the group writing rarely and all the other groups, namely those writing in English sometimes ($p = .022$), often ($p = .010$) and always ($p = .013$).

Table 3. The use of Anglicisms with respect to the frequency of English use

Use of English	**The use of Anglicisms**												
	Rarely			Sometimes			Often			Always			*p*
	N	M	SD	N	M	SD	N	M	SD	N	M	SD	
Speaking	12	2.26	.24	26	2.43	.30	39	2.44	.24	24	2.37	.28	.192
Listening	19	2.36	.26	25	2.35	.31	16	2.42	.23	41	2.45	.26	.313
Reading	56	2.35	.28	23	2.45	.17	10	2.60	.17	12	2.38	.36	.038
Writing	16	2.22	.19	20	2.43	.32	28	2.44	.25	37	2.43	.26	.046

Participants' familiarity with the meaning and the equivalent forms of Anglicisms

The third research question investigated whether Bosnian high school participants understand the Anglicisms employed in the questionnaire. They were asked to provide the English equivalent form as well as the appropriate Bosnian equivalent with the same meaning. Overall, the students exhibited greater knowledge of the English form (M = .63, SD = .23) than the appropriate Bosnian equivalent form (M = .53, SD = .24). When each Anglicism was explored individually, it was found that the nominal Anglicism for which the appropriate English form was provided (i.e., 95 correct responses) was Bos. (Anglicism) ofis/ Eng. office (M=.97,SD=.17), as well as its equivalent Bosnian word with the same meaning Bos. kancelarija (M = .94, SD = .23). The least known Anglicism proved to be Bos. koktel/ Eng. coctail (M = .21, SD = .40), and Bos. rialitišou/ Eng. reality show (M = .26, SD = .43), for which the participants were mainly unable to provide the appropriate Bosnian equivalent. Furthermore, the overall usage of nominal Anglicisms was analysed and compared to the overall usage of verbal Anglicisms and the participants demonstrated greater knowledge of nominal Anglicisms (M = .62, SD = 19) than verbal Anglicisms (M = .54, SD = .23). The mean values for each nominal Anglicism as well as its English equivalent and the appropriate Bosnian equivalent are provided in Table 4.

Table 4. Analysis of the participants' familiarity with nominal Anglicisms

	English-form		Bosnian equivalent			English-form		Bosnian equivalent	
Nominal Anglicisms	**M**	**SD**	**M**	**SD**	**Nominal Anglicisms**	**M**	**SD**	**M**	**SD**
ofis office/ured	.97	.17	.94	.23	fešnvik fashion week/sedmica mode	.76	.42	.55	.50
sin seen/viđeno	.92	.27	.87	.33	ivent event/događaj	.69	.46	.62	.48
eirkondiš air condition/klima uređaj	.69	.46	.57	.49	Menadžer manager/rukovodilac, upravnik	.32	.46	.44	.49
snajper sniper rifle/	.74	.43	.51	.50	Imidž image/izgled	.61	.48	.53	.50
miting meeting/sastanak	.81	.39	.74	.43	šoping centar shopping center/tržni centar	.54	.50	.57	.49
farma farm/imanje	.85	.35	.60	.49	Rialitišou reality show/zabavna TV emisija	.69	.46	.26	.43
snoubord snowboard/daska za skijanje	.81	.39	.36	.48	trend trend/modni pravac	.78	.41	.57	.49
koktel cocktail/žestoko piće	.21	.40	.47	.50	tinejdžer teenager/mladić	.75	.43	.58	.49
hepiend happy end/sretan završetak	.88	.32	.88	.32	skeč sketch/skica/kratka pozorišna komedija	.51	.50	.33	.47
ferplej fair play/poštena igra	.62	.48	.71	.45	bestseller bestseller/najprodavaniji artikal	.60	.49	.40	.49
vaterpolo waterpofo/vodeni sport	.56	.49	.41	.49	ofsajd off side/zaleđe	.64	.48	.47	.50

Regarding the knowledge of verbal Anglicisms, the highest mean value was obtained for the verb Bos. (Angl.) šerovati/ Eng. share (M = .84, SD = .36), with 88 participants providing the appropriate English form and the Bosnian equivalent (Bos. (po)dijeliti). The verb with the lowest mean was Bos. recenzirati/ Eng. review (M = .14, SD = .34), with only 14 participants providing the appropriate English form as well as the Bosnian equivalent. The results for verbal Anglicisms are presented in Table 5.

Table 5. Analysis of the participants' familiarity with verbal Anglicisms

	English form		Bosnian equivalent			English form		Bosnian equivalent	
Verbal Anglicisms	M	SD	M	SD	**Verbal Anglicisms**	M	SD	M	SD
tagovati to tag/označiti	.67	.47	.67	.47	manipulisati to manipulate/ upravljati	.36	.48	.36	.48
trenirati to train/ vježbati/obučavati	.54	.50	.54	.50	investirati to invest/uložiti novac	.55	.50	.55	.50
volontirati to volunteer/ dobrovoljno raditi	.45	.50	.45	.50	parkirati to park/ostaviti automobile	.46	.50	.46	.50
lajkati to like/sviđati se	.76	.42	.76	.42	blefirati to bluff/m obmanuti/prevariti	.30	.46	.30	.46
fotografisati to photograph (take a photo) / slikati	.53	.50	.53	.50	dizajnirati to design/urediti	.45	.50	.45	.50
daunloudovati to download/ skinuti (sadržaj sa interneta)	.75	.43	.75	.43	intervjuisati to interview/voditi razgovor	.38	.48	.38	.48
guglati to google/pretraživati internet	.67	.47	.67	.47	miksati to mix/miješati	.65	.47	.65	.47
surfati to surf/jedriti/pregledavati sadržaj interneta	.43	.49	.43	.49	šutati to shoot (a ball)/ udariti loptu nogom	.48	.50	.48	.50
bukirati to book/rezervisati	.37	.48	.37	.48	sprintati to sprint/ trčati velikom brzinom	.48	.50	.48	.50
šerovati to share/dijeliti	.84	.36	.84	.36	nokautirati to knock out/ oboriti nekoga udarcem	.47	1.16	.47	1.16
kombinovati to combine/spojiti/ sjediniti	.50	.50	.50	.50	spelovati to spell/ izgovarat/pisati svako slovo pojedinačno	.42	.49	.42	.49

Furthermore, the variability in their knowledge of the English equivalent form and the equivalent form in Bosnian with respect to the frequency of the usage of English in different aspects of language use was explored. The findings (Table 6) revealed that significant differences existed in the participants' knowledge of the equivalent forms in English based on their use of English through speaking ($F(3,97) = .9.939$, $p = .000$), reading ($F(3,97) = 8.778$, $p = .000$), writing ($F(3,97) = .6.522$, $p = .000$) and listening ($F(3,97) = 9.370$, $p = .000$). In fact, the more students speak in English, listen to it, read or write in it, the better knowledge of the English equivalent forms they demonstrate. A post hoc test showed that all the groups differed except for the groups that rarely and sometimes listen to English ($p = .290$), and speak ($p = .569$) and write in English ($p = .539$), and the groups that always and often listen to English ($p = .695$), speak ($p = .512$), read ($p = .336$) and write in English ($p = .431$). In terms of reading, an insignificant difference was also observed between the group that sometimes reads in English and the one that does it often ($p = .748$) and always ($p = .136$).

Table 6. The variability in the participants' knowledge of the English equivalent forms based on the use of English

English use	**The knowledge of English equivalent form**												
	Rarely			Sometimes			Often			Always			p
	N	M	SD	N	M	SD	N	M	SD	N	M	SD	
Speaking	12	.46	.21	26	.50	.25	39	.70	.18	24	.74	.19	.000
Listening	19	.47	.20	25	.54	.26	16	.74	.15	41	.72	.18	.000
Reading	56	.54	.23	23	.71	.20	10	.73	.14	12	.82	.14	.000
Writing	16	.48	.25	20	.53	18	28	.67	.24	37	.72	.19	.000

When the relation between the same variables and the participants' knowledge of the Bosnian equivalents of the target Anglicisms was explored, the findings were somewhat different (Table 7), and only speaking ($F(3,97) = 3.092$, $p = .031$) and reading in English ($F(3, 97) = 2.800$, $p = .044$) proved to be statistically significant in this respect. A post hoc test revealed that a significant difference existed between those who rarely speak in English and those who do so often ($p =. 031$) or always ($p = .027$), those who sometimes speak and those who speak often ($p = .043$) and aways ($p = .039$). In terms of reading only the group that rarely reads in English differed significantly from the one that does it sometimes ($p = .018$).

Table 7. The variability in the participants' knowledge of the Bosnian forms for the given Anglicisms based on the use of English

English use	**The knowledge of Bosnian equivalent forms**												
	Rarely			Sometimes			Often			Always			p
	N	M	SD	N	M	SD	N	M	SD	N	M	SD	
Speaking	12	.41	.18	26	.46	.23	39	.58	.21	24	.59	.28	.031
Listening	19	.46	.15	25	.49	.26	16	.57	.20	41	.57	.27	.250
Reading	56	.47	.20	23	.61	.24	10	.59	.34	12	.61	.25	.044
Writing	16	.44	.21	20	.49	.20	28	.59	.26	37	.55	.25	.166

Participants' attitudes towards the use of Anglicisms

The fifth research question analysed the students' attitudes towards the use of Anglicisms. The results indicate that the participants hold rather positive attitudes towards Anglicism usage, with the mean score above the split point of 3. The highest mean value was obtained for the statement "English is important to me because it expands my worldview" (M = 4.36, SD = .82), while the lowest mean was obtained for the statement "I find that borrowed words do not negatively impact my native language" (M = 3.46, SD = 1.25) (Table 8). Through the last research question, it was explored whether their attitudes vary with respect to nonformal English use (Table 8). A one-way ANOVA showed that the attitude differed significantly based on the frequency of the participants' speaking ($F(3,97) = 5.862$, $p = .001$), listening ($F(3,97) = 6.726$, $p = .000$), reading ($F(3,97) = 2.697$, $p = .50$) and writing in English ($F(3,97) = 10.034$, $p = .000$). Generally, the more they used English, the more positive attitudes towards the Anglicisms they demonstrated. A post hoc test showed that a significant difference was not found only between the group that sometimes speaks in English and the groups that often ($p = .216$) and always ($p = .081$) speak in English, and the group that speaks often and the one that does it always ($p = .481$). In terms of listening, no significant difference was found between those who listen to English rarely and sometimes ($p = .288$), rarely and often ($p = .616$), sometimes and often ($p = .631$). Similar results were obtained when the data for reading were taken into account and there were no significant differences between those who read in English rarely and sometimes ($p = .793$), rarely and always ($p = .092$), often and always ($p = .576$), and sometimes and always ($p = .092$). As for writing, insignificant differences were observed between the groups that rarely and sometimes read in English ($p = .126$), and the groups that sometimes and often write in English ($p = .151$).

Table 8. The variability in the participants' attitudes towards Anglicisms based on the English use

English use	**Positive attitudes towards Anglicisms**												
	Rarely			Sometimes			Often			Always			p
	N	M	SD	N	M	SD	N	M	SD	N	M	SD	
Speaking	12	3.25	.69	26	3.80	.64	39	4.00	.58	24	4.10	.59	.001
Listening	19	3.55	.60	25	3.75	.60	16	3.65	.57	41	4.20	.49	.000
Reading	56	3.80	.69	23	3.76	.66	10	4.30	.42	12	4.15	.43	.050
Writing	16	3.34	.64	20	3.65	.63	28	3.89	.67	37	4.23	.66	.000

DISCUSSION

The participants were high school students who in addition to learning English at school reported its rather frequent use outside of school. They claimed that they use English most frequently in writing, followed by speaking and listening, while they use it least frequently in reading. Such findings might be explained by some earlier findings measuring exposure to productive and receptive skills, which confirmed Bosnian EFL learners' more frequent exposure to writing and speaking than to listening and reading (Ogric-Kevric & Dubravac, 2017). The participants also confirmed that they use borrowed English words extensively, which corroborates previous findings on high usage of Anglicisms in this EFL context (Ajsic, 2014; Dubravac, 2016; Sehovic, 2009), particularly among young people for whom English is slowly becoming their identity expression tool (Brdarevic-Celjo, Ahmetovic & Bajic, 2021; Skopljak & Dubravac, 2019). Thus, a frequent use of English among new generations seems to be natural since they acquire English institutionally, through formal education as well as non-institutionally, being constantly exposed to it through the Internet, games, music and others, as confirmed in some previous studies (Dubravac et al., 2018). The first research question looked into the difference in the participants' use of common nominal and verbal Anglicisms. The results demonstrated that among 46 Anglicisms researched in this study, verbal Anglicisms tend to be significantly more frequently employed than nominal Anglicisms, which is not aligned to some previous studies in a similar context which confirmed a more frequent usage of nominal Anglicisms (Socanac, 1994). At the same time, such results can be explained by the fact that in the Bosnian language many new Anglicisms are coined by simply

adding verbal suffixes such as irati, ati, isati to noun bases and thus new words are produced as verbs. As for the formation of verbal Anglicisms in the Bosnian language, an English form serves only as a basis, while the receiving language is the one that provides affixes, because verbs in English do not have an infinitive suffix that would serve as a distinguishing feature in relation to other types of words, primarily nouns (Filipovic, 1990). As far as the Bosnian language is concerned, verbal suffixes for verbal Anglicisms are -ova(ti) (Bos. daunloudovati/ Eng. to download), -isa(ti) (Bos. intervjuisati/ Eng. to interview), -ati (Bos. lajkati/ Eng. to like) and -nuti (Bos. kliknuti/ Eng. to click). The prefix pro- and one of the aforementioned suffixes (-ati, -isati, -nuti) are frequently added to an English base, such as Bos. pro-gugl-ati/ Eng. to google to construct a new word. Likewise, infixes, such as -ir- are also added between the English form to photoshop adapted into Bosnian as fotošop and the Bosnian suffix -ati, as in Bos. fotošopirati/Eng. to photoshop. Tomic (2018) provides a detailed analysis of verbal Anglicisms and concludes that suffix -ovati is the most frequently represented verb suffix in the corpus of verbal Anglicisms the author analysed (in 31 out of 36 Anglicisms, 86.11%). Similarly, Sehovic (2009) indicates that in Bosnian, suffix -ovati is very common in the formation of verbal Anglicisms, especially in the field of information technologies (such as Bos apdejtovati/ Eng. to update, Bos. daunoudovati/ Eng. to download, Bos. diskonektovati/ Eng. to disconnect). As for nominal Anglicisms, some of the most frequently used ones were Bos. šoping centar/ Eng. shopping center, Bos. menadžer/ Eng. manager, Bos. sin/ Eng. seen, Bos. ofsajd/ Eng. offside, while those rarely used are Bos. fešnvik/ Eng. fashion week, Bos. eirkondišn/ Eng. air condition, Bos. ofis/ Eng. office, Bos. miting/ Eng. meeting. The most frequently used verbal Anglicisms were Bos. trenirati/ Eng. to train, Bos. guglati/ Eng. to google, Bos. parkirati/ Eng. to park, Bos. lajkati/ Eng. to like, Bos. fotografisati/ Eng. to photograph/to take a photo and the least frequently used verbal Anglicisms were Bos. bukirati/Eng. to book, and Bos. sprintati/ Eng. to sprint. The results for nominal Anglicisms šoping centar and menadžer are not surprising as these words are frequently used in the Bosnian context and the participants' familiarity with them was expected. The Anglicism šoping centar adapted from the English form shopping center/centre is a frequent occurrence on the signs in the Bosnian linguistic landscape. However, besides this fully adapted form, this Anglicism frequently occurs in its completely unadapted form shopping center or partially adapted form shoping centar which contains the incorrect spelling of the word shopping containing one p letter and the adapted word centar. As for the Anglicism menadžer (Eng. manager), it is adapted orthographically on the basis of the pronunciation of the English form. This word is frequently used in the Bosnian language as such and the Bosnian equivalent is rarely used. Thus, some authors believe that the word menadžer should not even be considered a loanword (Dzanic, 2009, p. 4). The Anglicisms fešnvik (Eng. fashion week), eirkondišn (Eng. air condition), ofis (Eng. office) and miting (Eng. meeting) were reported as rarely used, which might be explained by the fact that the words' Bosnian equivalents sedmica mode (Eng. fashion week), klima (Eng. air condition), kancelarija (Eng. office) and sastanak (Eng. meeting) are much more established in the Bosnian language and preferred to the aforementioned Anglicisms. The most frequent usage of verbal Anglicisms such as trenirati (Eng. train) and parkirati (Eng. park) was expected because no specific Bosnian one-word equivalents exist for these words. A very frequent usage of the Anglicisms guglati (Eng. to google) and lajkati (Eng. like) could be explained by the fact that these words are frequently used in an online setting, which is attended by younger generations and thus the current study participants on a daily basis. The words bukirati and sprintati are limited to specific contexts and have appropriate Bosnian equivalents and were thus rarely used by the current study's participants. The second research question confirmed that the participants' use of Anglicisms was related to the frequency of reading and writing in English, i.e., the most and the least frequent forms of language use outside school. The group that rarely reads or writes in English demonstrated a significantly lower use of Anglicisms. While the participants readily write in English, probably using social sites, reading is equally influential in this respect. Surprisingly, no significant differences existed between groups based on the frequency of speaking and listening to English. Still, it is noticeable that those who tend to speak often tend to use Anglicisms more, while the highest scores were also achieved by those who often or always listen in English. The third research question intended to check whether the participants are familiar with the equivalent English form as well as with the equivalent Bosnian form. Rather interestingly, the results confirmed that the participants exhibited a slightly greater knowledge of the equivalent English form rather than the appropriate Bosnian

equivalent in 17 out of 22 nominal Anglicisms, such as ofis/office, sin/seen, hepiend/happy end, miting/meeting, daunloudovati/ to download, miksati/to mix, guglati/to google, šerovati/to share etc. The Anglicism whose both English form and Bosnian equivalent are well-known and frequently used was ofis, as the participants were able to provide the English form office as well as the Bosnian equivalent kancelarija. On the other hand, the Anglicism whose English form was not well-known was Bos. koktel/ Eng. cocktail, which could be explained by the cultural surrounding in which these participants live. Likewise, the Anglicism whose Bosnian equivalent received the lowest recognition was Bos. rialitišou/ Eng. reality show, a fully orthographically adopted Anglicism. This is not unsurprising taking into account that this word is most frequently heard as an original English word or the adapted Anglicism. When the results of this study were further analysed, it was noticed that some participants are creative in providing the Bosnian equivalents for Anglicisms. Such examples include the Anglicism rialitišou/ reality show, for which the Bosnian equivalent zadruga, the name of a reality show aired in Serbia, was provided, which might be an example of how a word can be denoted by what it represents to the speaker and not by its actual meaning. Another interesting answer was provided for the Anglicism ivent/event, which one study participant translated into English as 'dating' or 'spending time with someone you have a romantic relationship with'. This respondent thus indicated that this word, a very broad word in terms of its meaning, has been narrowed only to 'dating' for some participants. One of the respondents answered that the Anglicism lajkati/ like means to confirm. Moreover, for the Anglicism bestseller/ bestseller, a rather interesting Bosnian equivalent ide k'o halva/ sells like sweet pastry was provided, which is a catchy phrase in the Bosnian language meaning that something sells well. The task of providing the English equivalent for each Anglicism was expected to be more difficult than providing the Bosnian equivalent due to the fact that English is a foreign language, but this was not corroborated in the current research study. The reason for this might be found in the participants' frequent exposure to the EL input, as confirmed by the current study findings. As discussed earlier, the participants reported a reasonable exposure to listening and reading activities in English, which, together with their production through speaking and writing, explains their ability to produce the appropriate English form. Interestingly, while all the modes of nonformal English use significantly affected the knowledge of English equivalent forms, only speaking and reading had the same effect on their knowledge of equivalent Bosnian forms. Thus, both the use of and exposure to English contribute significantly to the familiarity with English forms, which is not surprising as it has been already indicated that it presents a relevant factor for vocabulary learning (Peters, 2018; Peters & Webb, 2018; Teng, 2015; Webb, 2015). On the other hand, while higher means were also achieved by those who often or always write in English or listen to English, the overall p value for the differences between the groups was insignificant. Thus, speaking seems to be a more important productive skill and reading a more important receptive skill in this respect. The reason for this might be that the students pay more attention to meaning while speaking and reading, making more frequent references to the native Bosnian forms. The last research question investigated the participants' attitudes toward the use of Anglicisms and the findings indicate that the participants share positive attitudes and employ Anglicisms for easier expression and that they do not consider them a threat to their native language. The nonformal use of English presents a significant variable modifying our participants' attitudes and those who tend to listening to English more or read, speak, and write in English more share more positive attitudes. They probably belong to those who use English as their identity marker (Dubravac & Skopljak, 2020) and thus see it as an asset and not a limitation.

CONCLUSION

In all languages, there is often a need for new words when naming new objects, concepts, or ideas. As noticeable from the present research, Anglicisms have an inevitable influence on the Bosnian language. The number of words borrowed from the EL in the present-day Bosnian language is not negligible and these words occur almost daily in casual conversations in streets, educational institutions, media, and many other places. Some commonly used words, such as guglati/ to google, ofis/ office, menadžer/ manager, kalkulator/ calculator, dizajn/ design, motel/ motel, and many others further confirm a vital role of English in the Bosnian context as well as its impact on the Bosnian language. The incorporation of Anglicisms into the Bosnian language varies from partial to full assimilation in orthography, phonology, morphology and semantics. However, together with an increase in the usage of

these words, their meaning and understanding should also be developed. The results indicate that Bosnian participants use most of the Anglicisms provided in the questionnaire but that they are not completely familiar with the meaning of some of them. The study also shows that both receptive and productive English skills developed outside school contribute significantly to more positive attitudes towards Anglicisms and the knowledge of the equivalent English forms. However, only reading and writing are significant for more frequent usage of Anglicisms and speaking and writing for the knowledge of Bosnian equivalent forms. The conclusion to be drawn from the present investigation is that the Bosnian language is under a growing influence of English and borrowed words are becoming an accepted phenomenon. The current study may, thus, serve as an attempt to raise awareness of possible outcomes of constant language contact and draw linguists' attention to new Anglicisms borrowed into Bosnian. With a rapid development of technology and massive international trade and movement, more and more words are likely to be adopted and used instead of equivalent Bosnian words and studies like the present one may contribute to their tracking, sorting and evaluation. The present study is however not without limitations. Since the participants were only high school students, further studies should also include the other categories of participants to provide a more holistic picture. Moreover, participants of different age should also be included, so that the impact of age could be measured, as the usage and acceptance of Anglicisms is expected to depend upon age.

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THE USE OF MOBILE APPS TO ENHANCE READING SKILLS OF LANGUAGE LEARNERS: A REVIEW

Review paper

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ABSTRACT

Reading activities are generally compromised owing to the time constraints in the classroom. As an outcome, students' inability to understand a passage has an adverse effect on their enthusiasm and confidence despite knowing that reading acquisition plays a crucial role in language learning. In this regard, mobile apps seem to be the powerful support for acquiring reading skills and interpreting comprehension which are the two challenging aspects of language learners to be knowledgeable enough. They also enrich readers with vast opportunities and provide a stress-free environment that aids them to improve their reading skills. The paper reported here explores the effectiveness and the role of mobile applications in acquiring reading skills. Reviewed articles and dissertations used in this paper focus on the development, analysis, examination of the mobile apps for enhancing reading skills. The paper also explores the research design, methodology and theory that support the usage of chosen mobile apps for the research. This review article concludes that reading skills can be enhanced better through mobile apps than that of the conventional academic setting.

Keywords: *reading activities, reading acquisition, mobile apps, comprehension, stress-free environment*

INTRODUCTION

In the new era, MALL (Mobile Assisted Language Learning) has become an academic technology. It provides complete and regular access to applications and systems that assist informal and formal acquisition. The Learning environment has moved from the conventional classroom and stretched its horizon. MALL contains many striking characteristics that are highly valuable for educational institutions and universities. It has convincing features like rich educational content, immediate access to resources, feasibility which supports collaborative and independent acquisition and these provide effective learning atmosphere and improve professional skills. "Mobile devices cover cell phones, smartphones, PDAs, tablets, etc. All of these can be used for MALL. Currently, the majority of MALL activities seem to make use of mobile phones." (Kukulska-Hulme & Shield, 2008; Mehta, 2013). This statement asserts that the latest methods of learning are simplified with the help of smartphones, PDAs, tablets, etc. which helps to have quick access to learning within varied settings. Social networks and virtual groups share information, ideas, news and so on. In the present era, students widely connect to these social networks through smart phones and its applications. By imparting social media in mobile

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learning a self-directed learning environment that includes additional engagement, interaction and collaboration can be maintained. Resources and tools meant for teaching and learning can be shared and students can access the same instantaneously. "Mobile devices were expected to encourage innovation in education and increase high-level abilities." (Sung, Chang, & Yang, 2015). It is well known from the research of Burston, J. 2013. that many publications on the concept 'MALL' have been concentrating on the reports to include the same into various aspects of learning a language but there is a very limited report regarding learner-centred m-learning activities in language. Reading is one of the important productive skills in learning a language. It is the capability to relate with a text and comprehend the words. Since we are in an era of technology and every student uses smart phones, it can be well utilized to teach reading skills. It is the need of the hour to explore the appropriate applications to improve reading skills. The present article is based on the literature review of various sources on the topic chosen in available databases. And also, on the categorization of apps to assist learners in selecting the best apps to use to enhance their reading skills. The main purpose of this review paper is to examine original, peer-reviewed English research articles and to assess the use of mobile apps to enhance the reading skills of language learners. Thus, the objectives of this paper are as follows:

- To identify the apps which are more effective and helpful for language learners
- To open up new dimensions in learning/ teaching methods for language learners
- To identify whether students can show significant progress in reading skills by using mobile apps

A. Importance of mobile apps in acquiring reading skills

A new market of software called apps is quickly emerging with the evolutionary growth of the smartphone. Smartphone users can choose and download mobile apps from application stores like Play Store (Google Play) and App Store (Apple's). There are only a few studies on the investigation of mobile applications (Arús-Hita, Rodríguez-Arancón, & Calle-Martínez, 2013; Kim & Kwon, 2012). Research by Kim and Kwon (2012) presented an insightful review on the efficiency of 87 mobile applications in learning language. Their investigation is on different features of mobile apps, its strengths and weaknesses in order to utilise them for successful MALL. The result of their research states that the approachability and feasibility of the apps are important for student-centred learning. At the same time, Kim and Kwon advised that the applications should be developed using different learning opportunities.

B. Guidelines for English-Learning Apps

There is no doubt that learners are gradually turning to online resources for learning as the accessibility of apps on mobile devices have become so easy. "Online resources bring an easy way to knowledge that is useful and relevant." (Nichols, 2003). There is no doubt that learners are gradually turning to online resources for learning as the accessibility of apps on mobile devices have become so easy. While encouraging students to use mobile apps for learning English, it is good to consider the benefits of apps that can help learners to compare and organize various sources as part of their assignments and assessments. Since internet has its own problems, the information available on mobile applications can't be regulated for the accuracy or quality like the similar information available on newspapers, T.V programs or books. The guidelines by Tomlinson (2010) about English Resources are as follows:

1. English materials should include interesting and engaging tasks.
2. English materials should contain enough spoken and written text.
3. Learners should be exposed sufficient examples of language in authentic use.
4. Language input in materials should be conceptualized.
5. English materials should include activities that provide critical thinking and encourage learners to visualize.

The guidelines by Howard and Major (2004) about Online English Resources are as follows:

1. Online English resources should have appropriate instructions.
2. Online English resources should stimulate interaction and be generative.
3. Online English resources should be attractive and flexible.
4. Learners are encouraged to develop learning skills and strategies when they use online English resources.
5. Online English resources should link to each other to develop a progression of skills and understand the items in a language.

In addition to the above guidelines, the updation of applications is one of the most needed criteria.

When self-regulated learner uses his/her smartphone to acquire English language skills, updation turns out to be more significant. Since English resources keep updating almost every day, a great amount of updation can hold the learner's money, energy, time, etc. in the process of learning English.

C. Reading is an Inter-Disciplinary Skill

Reading is a difficult practice that includes process of communication between the reader and the author. It is one of the important skills to be acquired for language proficiency. Students need to comprehend huge amount of data available in textbooks and on the internet as a part of their academics. Besides poetry and novels in the language classroom they need to interpret a scientific report and write research papers. It is sad to note that students hesitate to read. "Reading comprehension skills are particularly critical for students as they progress in school and the focus becomes no longer on learning to read, but rather reading to learn." (Lapp et al, 2008; Ness, 2009). Thus, students who are poor in reading cannot do well in writing and speaking. Therefore, it is necessary to suggest them with effective mobile apps for reading in order to help them to improve their reading skills. There has been a rising demand for various methodologies that focus on cultivating reading skills. One of them is using a mobile app. "Apps available for use in language learning and teaching has become very diverse and become central to language practice." (Motteram, 2013). There are umpteen number of mobile apps available in both Play Store and App Store to get the hold of reading skills. All that to do is to open the store and click on search option and type whatever is needed and select the one from the gigantic list and finally install. Once the installation process is done, the app starts working in agreement with its operating system to help the user's need. Many apps come with user-friendly services in order to cope up with the competitive world. For example, Reading TOEFL preparation tests app benefits the user to practise 'reading comprehension'. One can check one's skill in 'Part A: Vocabulary' or 'Part B: Reading Comprehension' and later check if one's answer is correct or wrong. Part A helps to learn synonyms, choose the right word, fill in the blanks, make a collocation, word substitution, and choose the best word. Reading skills test can be taken by attempting simulation test. Likewise, there are numerous apps with multiple features that cater the users to develop proficiency in language according to one's convenience. Learning a language through mobile apps is entertaining, economical and timesaving.

D. Mobile apps for improving reading skills

After the relevant literature was reviewed, the researcher consulted the following guidelines to categorise the mobile apps for improving reading skills:

1. The selected apps should have updation. It means that the learning materials on the apps are updated periodically.
2. The selected apps must be downloaded freely into users' computers and mobile phones.
3. The chosen apps must have a high popularity rate and practical applicability.
4. The materials or contents supplied by the selected apps must meet the criteria for English resources (Tomlinson, 2010) and the guidelines for online English resources (Howard & Major, 2004).
5. Few advertisements and games are included in the apps. No use for commercial purpose.

Based on the researcher's exploration and investigation, the reading apps namely Reading Comprehension Test, Reading TOEFL preparation Tests, Reading Comprehension GRE Test prep & practice and Speed Reading – brain training were chosen as the best apps to enhance the reading skills. These apps were selected from the top-ranking popularity and they were all chosen according to the above-mentioned guidelines. The details of these reading apps are as follows:

1. Reading Comprehension Test

This app provides different tests on English reading. Learners can practice comprehension passages at different levels and attempt the reading tests. This app helps learners to examine outcomes of all their reading tests in a very simple way.

2. Reading TOEFL preparation Tests

This app helps the learners to improve their TOEFL score. By using this application, learners acquire vocabulary, grammar, etc. With this app, one can study for free with the questions available and obtain the score reports with correct answers.

3. Reading Comprehension – GRE Test Prep & Practice

With this simple app, one can acquire the basics of reading comprehension, practice ques tions, attempt tests, assess one's performance and learn more about one's strengths and weaknesses in understanding comprehensions.

4. Speed Reading – brain training
This app can help to increase one's reading speed to the expected level without relying on any expensive courses. The simulators available in this app will help the learners to remember words and numbers quickly, improve the ability to concentrate, enhance the perception and improve the speed of reading.

METHODOLOGY

A thorough review of relevant literature on mobile applications is necessary to gain knowledge on how to develop reading skills. This study not only studies the related research, but also validates the exceptionality of the work done in the field. The literature review is centered on acquiring reading skills, its methodology and the tools used for research progress with reference to mobile technology apps. Kuldeepsinh J. Sisodiya (2017) in his thesis titled *Mobile technologies to enhance communication skills of first year engineering students* examined that the mobile phone is an effective instrument to enhance writing and speaking skills of first semester engineering students. He picked his sample by random sampling method, without any elimination or selection process. Data was collected through questionnaire, pre and post-tests. He inferred that mobile device can be an effective tool to successfully learn the language with simple applications. The result recommended that MALL has considerably positive effects on the test scores of the students. Besides, students have shown positive attitudes in preferring MALL instead of CALL to develop their writing and speaking skills. Lakshmi K (2017), in her research paper titled *A study on the effectiveness of M-learning in developing English speaking skills of Rural Engineering students in Vellore district* states that rural engineering students feel difficulty in expressing their views in English language and they are very reluctant to speak in English owing to lack of confidence, fear of wrong utterances and low self-esteem. To validate her research, data collection tools like personal information questionnaire, Aptis speaking assessment tool by British Council were used. Through her research, she has found that the utilization of m-learning inside and outside classrooms would enable the learners to use English sentences correctly in spoken form. Mousa mahmoud abu laban (2017) in his thesis *The effectiveness of using mobile learning in developing eleventh graders' English grammar learning and motivation for English* applied experimental approach with 70 EFL male learners as sample for his study. He designed and used instruments like Achievement Test and Motivation Scale to achieve his purposes of the research. Statistical techniques such as T. Test, Spearman correlation, Pearson correlation coefficient, Split-half, Alpha Cronbach techniques and Eta square were used. The result achieved revealed statistically significant differences between the control and the experimental groups, where the favor is on the experimental group. His research suggested the need of developing Mobile learning apps in teaching and learning English grammar to get better student outcomes. Parmar (2015) in his thesis entitled *Acceptance and effectiveness of mobile learning in teaching and learning of English language- A Study* asserts that mobile technology is accepted by language learners to a great extent and can be effectively used to complement classroom face-to-face English language teaching and learning. He administered IT awareness questionnaire to gather students' demographic information and to know their extent of awareness in operating mobile devices and using mobile applications. He used two distinct models, UTAUT 1 and UTAUT 2 to identify the acceptance of information Technology. The researcher used online platforms namely Edmodo and WhatsApp to share texts, lesson plan, and questionnaires with students and teachers. To know the student's perception on mobile learning, data collection tools like telephonic interview, journals and reflective reports were administered. Ashley Yang. (2015), in his study *The effects of reading app usage on reading comprehension* tried to find the relationship between the use of reading apps and the reading comprehension. iPad was used as a research tool for a five-week long reading enrichment plan to analyse how this would affect the reading abilities of students. The app named 'Booksy' was chosen and it was found that it had negative effects on reading comprehension and giving instructions to enhance reading skills through app was not supported. Another research by Qiaochu Liu and Xuan He (2014), *Using mobile apps to facilitate English learning for college students in China* mentions that they experimented with 15 undergraduate students in China. They found that they are enthusiastic to use mobile apps to acquire English knowledge with self-regulated learning approach rather than traditional learning approach. They also researched the apparent online resource that helps the students to develop their listening, speaking and reading skills.

Data collection tools like survey questionnaire, semi-structured interview and experiment were administered in their study.

Finally, based on the outcome of the experiment, they provided useful instructional strategies for undergraduate students to develop self- learning of English language skills.

Hao et al. (2019) conducted research titled *An evaluative study of a mobile application for middle school students struggling with English vocabulary learning* and examined how m-learning can help weak students to develop English reading skills. They found that students, who are weak and side-lined frequently in the class, become capable, show significant progress and fetch good result by the usage of mobile applications. Jamaldeen et al. (2018) in their study *Design guidelines for creating mobile language learning applications* consider mobile learning as one of the main areas of education that is still expanding. They conducted an experiment on a mobile learning application and asserted that the users' attitudes towards m-learning were favourable. However, their findings imply that m-learning would be more efficient when used as a supporting tool rather than as the main tool. Kalyan Chakravarthy. C, Sunitha. V. (2020) in their work *An exploration of mobile apps to enhance the feasibility of Mobile Learning in engineering students for effective Reading Skills* explored the effectiveness of obtaining reading skills using mobile apps against the conventional method of developing reading skills. Twenty first-year Engineering students were chosen as samples for this study, who were further divided into an equal number of experimental and control groups in a random manner. The data was gathered through questionnaire, pre and post-tests. The mean score had a significant difference. The score of experimental group (M = 17.8, SD = 0.93) was higher than that of control group (M = 14.1, SD = 0.87). The data collected and the results indicated that the experimental group considerably outpaced the conventional group in their knowledge of understanding the reading comprehensions. Klimova (2019), *Impact of mobile learning on students' achievement results* states that mobile apps help in developing language skills. It helps to recollect new list of vocabulary and increases students' motivation. He found that using mobile apps can boost students' confidence level and involvement. Naderi and Akrami (2018) in their research titled *EFL Learners' reading comprehension development through MALL: Telegram groups in focus* studied on the effects of reading com prehension with the mode of Telegram (on line Messenger). Their study states that the students choose smartphone as the best instrument for reading and analysing short texts since the online instruction has become prevalent. Elfeky and Masadeh (2016) in their study titled *The effect of mobile learning on students' achievement and conversational skills* examined the impact created by mobile devices on the students' achievements and improvements through quasi-experimental approach and observation. They acquired positive results and recommended mobile phone with relevant apps usage in classrooms. Leis et al. (2015), in their study *Smartphone Assisted Language Learning and Autonomy* investigated the effects of using smartphones in the classroom where students' autonomy plays a vital role. They found that the learners who are motivated to utilise smartphones in classroom learned to a greater extent with more autonomy compared to the students who are restricted to use smartphones in classroom. Their study suggests that students should be given freedom to learn language by using smart phones. Another study by Ghada Itayem (2014) entitled *Using the iPad in Language Learning: Perceptions of College Students* states that the learners appreciated the technology as very useful in learning. The study was conducted to examine the students' acceptance of iPad technology in their integrated language learning courses namely Listening, Speaking, Reading and Writing. To achieve this purpose, the Total Acceptance Technology (TAM) was applied in the research. This research set up a structural equation modelling approach to represent the casual relationships among the model factors. The result of this study indicated that the iPad was observed to be useful and easy to use in language learning courses. Vinu (2011) emphasizes the concept of establishing mobile learning technologies to make the process of learning efficient and productive in his dissertation titled *Towards pervasive mobile learning – the vision of 21st century.* Suvarna Ragini (2010) in her thesis *Exploring online reading strategies for improving reading skills at secondary school level* states that there is a need to make learners involve in more exciting method of reading instead of preparing them routinely for content-based examinations. Her study was carried out for an academic year where students were exposed to online reading along with regular curriculum. The data was collected through interviews, personal interaction, questionnaires and direct observation reports of the online reading sessions. She evaluated reading tasks

based on the four constructs namely vocabulary recognition, inferential comprehension, critical comprehension and over all task performance. Her study concluded that the students were able to enjoy doing online reading tasks more than their academic lessons, as these helped them acquire new knowledge and skills in a more enjoyable manner. In connection with the present study, there are a few review articles which give more insight into the mobile apps and their uses. The review article by Jaroslav Kacetl and Blanka Klímová, (2019) *Use of Smartphone Applications in English Language Learning—A Challenge for Foreign Language Education* assessed various journal articles and found that mobile learning has become an important characteristic of education since it is a good opening for foreign language learning. His study focused on learner's cognitive capacity, motivation, self-sufficiency and self-reliance to reach their study goals. *Wright et al. (2013), in their study Using E-readers and Internet resources to support comprehension* concluded that there should be an inclusion of electronic readers in contemporary classrooms. Besides, they argued that public libraries always provide an alternate access to digital resources where literary assets may not be available within the realm of the brick-and-mortar school building. Ali, Jason. (2017) in his dissertation titled *Mobile device use in student learning process* examined various ways where students utilize the mobile devices and services of their institution and acknowledged possible methods in which mobile devices can be used to assist the learning process of students. In his study, he has laid the emphasis on the Moodle application called 'Reppu' which can solve several issues faced by students while using the same. Another study by Ramya, G., and Madhumathi, P. (2017) *Review on Use of Mobile Apps for Language Learning* states that umpteen numbers of resources can be provided by mobile devices where learners are exposed to reliable material such as English songs, English news, Live streams and Radio. They classified the mobile apps based on primary, secondary and territory learners. This classification is meant to make the learner choose the relevant app that satisfies their learning needs.

RESULTS AND CONCLUSION

This review paper is proposed to study the use of mobile apps to enhance the reading skills of undergraduate students. After going through the relevant thesis and scholarly articles, the researcher found that the teacher, being a language facilitator in a classroom, has to be open-minded to motivate the learners in using mobile devices and language learning apps. Since mobile devices and their uses are becoming inevitable, services like broadband, WIFI and further internet services have to be assisted in handy to the learners at the institution (both outside and inside the classrooms). Being updated in knowing the various apps availability on the internet and their effectiveness, trainers can make the language learning easier and the same can be made applicable to the learners. Students have to be motivated to stay connected and share information on language learning apps with one another. With reference to various studies examined by the researcher, it is observed that the mobile apps meant for students centered approach and activities conducted undoubtedly motivate the learners and gives better results. Students need to be taught how to use these mobile apps efficiently. Teacher's intervention and effective guidance will encourage the learners in developing reading comprehension skills. Findings show that these mobile apps play an effective role in teaching learning process and are able to give proper insights to the language trainers and learners. Yet, to attain the full benefit of these apps, trainers are suggested to design innovatively, plan cautiously and implement thoughtfully keeping in mind the learners' interest and motivation in acquiring reading skills. However, the apps chosen should consider the aspects like learners' thinking capacity, interest to read, freedom and openness to enhance their comprehension better.

RECOMMENDATIONS

In the prospects of communication and education, interactive multimedia has grown as a big opening. Development in technology has vividly enriched the present academic world. Further, opportunities to alter the conventional academic setting for mobile learning have been shaped by the wide use of mobile technologies. Self-regulated learning through mobile apps definitely caters the possibilities to acquire different language skills. "Student-centered Learning represents both a mindset and a culture within a given educational institution and is a learning approach which is broadly related to, and supported by, constructivist theories of learning." (Attard, Iorio, Geven & Santa, 2014). Self-regulated learning allows students to choose their own ways to learn, assess and decide according to their needs. The limitations of this review contain various methodologies conducted in studies by the researchers, samples chosen and the examining of different language skills.

The future research can be focused on the use of mobile apps to enhance all four language (L, S, R, W) skills from the perspective of student-centered learning.

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TRAINING OF FUTURE EDUCATORS TO WORK WITH PARENTS AND THEIR ROLE IN THE AREA OF PARTNERSHIP BETWEEN THE EDUCATIONAL INSTITUTION AND FAMILY

Original scientific paper

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ABSTRACT

The main goal of this research was to determine whether and to what extent educational programs and curriculums for preschool education develop competences in students that are needed for establishing partnership with parents. The basic research technique is the analysis of syllabus documentation. The analysis was created for the preschool education educational programs in the Federation of Bosnia and Herzegovina (University in Tuzla, University in Zenica, University in Bihac, University in Sarajevo), and it showed that there are differences between institutions in the aspect of presence of study courses that prepare future educators for the work with parents. The results of the research have shown that there are differences in relation to the examined units of analysis and that the degree of conformity of syllabus contents for the course subject Family Pedagogy and Partnerships with parents varies in relation to the examined areas.

***Keywords**: educator, partnership, professional competence of educators.*

INTRODUCTION

Regardless of how well preschool education educational programs are prepared, required success cannot be achieved unless family is included in that process. The basic prerequisite for optimal child development and an important aspect of the quality of preschool education is joint action between educators and parents, through mutual informing, support and appreciation (Visnjic Jevtic, 2018). A continuous exchange of information about a child between parents and educators leads to a better understanding of the child, and a more complete education and upbringing in accordance with the child's individual needs (Nenadic-Bilan and Zlokovic, 2015). Therefore, an educator's profession requires interdisciplinary approach in all areas of education and upbringing in nursery school, and aside from all the competences, an educator must also acquire competences necessary for partnership with parents already during studies (Rogulj, 2018). However, aside from the fact that values of partnership are well known, according to Epstein (1985) a great number of educators has little or no training on including parents into the educational process. Many educators lack necessary skills and knowledge on how to work with families efficiently. According to Ljubetic and Mandaric Vukusic (2012) in order to acquire necessary knowledge and skills, a modern educator must have multidisciplinary education and qualifications to solve problems in everyday practice, one of which is the approach to the questions of

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partnership with parents. In order for the students of preschool education during their formal education to acquire necessary competences for the development of partner relationship with parents "which becomes one of the fundamental challenges for the science, profession and parents, the existence of compulsory course subjects Family pedagogy and Partnership between family and educational institution is necessary (Ljubetic, 2014, pg. 99). For Hornby (2000) two key educator's characteristics are essential for the development of partner relationship with parents, and those are:
- when communicating with parents, educators must be authentic, because that is the only way they can be open and acknowledge their mistakes, then, show respect to others, because only that way educators show parents that they take their opinion seriously and into consideration, and to be emphatic which enables them to see the child's situation from the parent's perspective.
- Secondly, an educator must be optimistic and realistic regarding a child's development, and not hesitate from an open and honest conversation with parents, but with a certain amount of sensitivity.
In order to understand a parent's different perspective, it is very important for an educator to possess active listening skills, as well as skills of non-verbal communication (Castle, 2004). Therefore, educator's expertise is important in order for them to achieve quality and successful partnership with parents, as well as their competences, knowledge and skills for establishing effective communication with parents. The results of the research by Smith and Sheridan (2019) indicate that initial education of educators has a significant influence on the development of competencies of educators for creating partnership with parents, as well as forming attitudes on the partnership. Positive attitudes of educators and parents towards the partnership reflect on the achievement, behaviour, and socio-emotional development of children (Orillosa, Magno, 2013). Precisely during initial education educators must be trained to establish partnerships with parents through development of professional knowledge and skills for providing support to parents as their children's first educators (Klisanic et al., 2020). The concept of competencies Weinert (2001) describes as a complex system of, not only knowledge and skills, but also strategies that are necessary for application of those skills and knowledge, corresponding attitudes and emotions, as well as successful self-regulation of those competencies. Visnjic Jevtic (2018, pg. 96, 97) finds that educators' professional competencies for establishing and maintaining partner relations with parents require knowledge on certain strategies and techniques for parents' inclusion, on different family dynamics and functioning, on work with parents, on obstacles and support system provided to parents by the society, communication, organisational and collaboration skills. Attitudes and beliefs of both sides influence the development of a quality partnership between educators and parents.

METHODOLOGY

The aim of the research it to analyse course curriculums to determine the possibilities of the initial education programs for the development of future educators' competences for partnership with parents. In accordance with the goal, the following the following research assignments have been set:
1. To determine the representation of course subjects for the preparation of future educators for partnership with parents at public universities in the Federation of Bosnia and Herzegovina
2. To analyse program structure of course subjects that contribute to the development of competences of future educators for partnership with parents.
In order to achieve the aim, the analysis included course curriculums of preschool education at four public universities in the Federation of Bosnia and Herzegovina, as follows: University in Sarajevo, University in Tuzla, University in Bihac and University in Zenica. For the analysis of course curriculums the following official documents were used, downloaded from the faculty's internet web sites:
- Course curriculum from the first cycle of studies at the department of Preschool education with the application from the academic year 2018/2019, Faculty of Philosophy in Tuzla;
- Course curriculum from the undergraduate studies at the department of Preschool education (2018), Islamic pedagogical faculty, University in Zenica;
- Course curriculum at the department of Preschool education with the application from the academic year 2018/2019, Faculty of pedagogy, University in Bihac;
- Course curriculum from the undergraduate and graduate studies at the department of Preschool education with the application from the academic year 2011/2012, Faculty of Pedagogy, University in Sarajevo.

RESULTS AND DISCUSSION

After completing an insight into course curriculums at the study programs of preschool education at public universities in the Federation

of Bosnia and Herzegovina, an analysis of the planning structure of the studies was undertaken within which the focus was placed on the analysis of representation of course subjects aimed at studying family upbringing and partnership between the educational institution and family, and on the analysis of the status of those course subjects according to the criteria: obligation (obligatory or elective), how many semesters they are studied, and what number of lectures and practice hours a week and what number of ETCS points was stipulated for these course subjects.

Table 1. Representation of course subjects from the area of partnership with parents and course subjects aimed at studying family upbringing at the study programs of preschool education at public universities in the Federation of Bosnia and Herzegovina

Faculty	Name of the course subject	Semester	ECTS	Status	P	S	V
Faculty of pedagogy, Sarajevo	Family pedagogy	Semester 6	2	O	1	0	1
Faculty of philosophy, Tuzla	Family Pedagogy	Semester 5	5	O	3	0	2
Islamic pedagogical faculty, Zenica	Family pedagogy	Semester 3	4.5	O	2	0	2
	Partnership between family and nursery school	Semester 8	4.5	O	2	0	2
Faculty of pedagogy, Bihać	Family pedagogy	Semester 2	4	O	2	1	0

Note: Status: O-obligatory course; I-elective course/ P – lectures; S – seminars; V – practice

From the results shown in Table 1 it is noticeable that the course subject from the area of partnership between educational institution and family is only represented at the study program of preschool education at the Islamic pedagogical faculty in Zenica (*Partnership between family and nursery school*). At the Faculty of pedagogy in Sarajevo, Faculty of philosophy in Tuzla and Faculty of pedagogy in Bihac, course subjects that primarily relate to acquiring competences for partnership with parents are not represented at the study programs of preschool education. Course subject *Family pedagogy* is only represented at the Faculty of pedagogy in Sarajevo and Faculty of pedagogy in Bihac, and the course subject called *Family pedagogy* at the Faculty of philosophy in Tuzla and Islamic pedagogical faculty in Zenica. The results of the analysis of course curriculums within the study program of preschool education at public universities in the Federation of Bosnia and Herzegovina presented in Table 1 show that all course subjects aimed at studying family upbringing (*Family pedagogy*) and partnership between educational institution and family (*Partnership between family and nursery school*) are represented as obligatory courses in course curriculums. Considering the number of semesters in which course subjects aimed at studying family upbringing and partnership between educational institution and family are represented at study programs of preschool education, according to the indicators from Table 1, all mentioned course subjects are represented for one semester. At the Faculty of pedagogy in Sarajevo, students take *Family pedagogy* in semester 6, at the Faculty of pedagogy in Bihac in semester 2, whereas *Family pedagogy* is represented in semester 5 in Tuzla, and semester 3 at the Islamic pedagogical faculty in Zenica. The course subject *Partnership between family and nursery school* is represented at semester 8 at the Islamic pedagogical faculty. According to the data from Table 1, the mentioned course subjects carry from 2 to 5 ECTS points. Thus, at the Faculty of pedagogy in Sarajevo the course subject *Family pedagogy* carries 2 ECTS points, and at the Faculty of pedagogy in Bihac 4 ETCS points. At the Faculty of philosophy in Tuzla the course subject *Family of pedagogy*

carries 5 ETCS points, and at the Islamic pedagogical faculty in Zenica 4.5 ETCS points. The course subject *Partnership between family and nursery school*, which is also taught at the Islamic pedagogical faculty in Zenica, carries 4.5 ETCS points.

There is also a difference regarding weekly number of lessons stipulated for the mentioned course subjects at certain universities. Therefore, the course subject *Family pedagogy* at the Faculty of pedagogy in Sarajevo is represented with one hour of lectures and one hour of practice. At the Faculty of philosophy in Tuzla, the course subject *Family pedagogy* is represented with three hour of lectures and two hours of practice. The course subject *Family pedagogy* at the Islamic pedagogical faculty is represented with two hours of lectures and two hours of practice, as well as the course subject *Partnership between family and nursery school*. At the department for preschool education at the Faculty of pedagogy in Bihac *Family pedagogy* is represented with two hours of lectures and one hour of seminars.

The results of the analysis of the orientation of program contents of course subjects from the area of family upbringing on the partnership between educational institution and family, and the compliance of course contents, aims, learning outcomes and literature within those course subjects, and which are taught at study programs of preschool education at the public universities in the Federation of Bosnia and Herzegovina, indicate that the aim, outcomes and program contents of the course subject *Family pedagogy* at the Faculty of pedagogy in Sarajevo, aside from the orientation to general knowledge from the area of family upbringing, are also oriented towards development of competences of educators from the area of partnership between educational institution and family. Aims, learning outcomes and appropriate contents in that part, are oriented towards development of competences of educators for organising advisory work with parents, children, as well as family as a whole. Within obligatory literature one source is stipulated that is partly aimed towards studying partnership between educational institution and family (Pasalic-Kreso, A. (2011). *Coordinates of family upbringing, a contribution to the systemic approach to understanding the family and family upbringing*. Sarajevo: Dobra knjiga). The course subject *Family pedagogy* that the students of preschool education are taking at the Faculty of philosophy in Tuzla aims for the future educators to get acquainted with the most important determinants of family pedagogy and to be trained to recognise fundamental educational questions and problems within the family, as well as for their practical resolution. Aims, contents and learning outcomes, aside from the directionality towards general knowledge from the area of family upbringing, are aimed towards familiarising students with basic starting points in building partnerships between educational institution and family, with the emphasis on advisory work with parents. Within obligatory literature a source is stipulated that is partly directed towards studying partnership between educational institution and family (Pasalic-Kreso, A. (2012). *Coordinates of family upbringing*. Sarajevo: Jez). Aims, outcomes and program contents stipulated within course subject Partnership between the family and nursery school at the studies of preschool education at the Islamic pedagogical faculty in Zenica, are primarily aimed towards studying partnership between educational institution and family, on the development of competences of educators for the growth of partnership between family and nursery school, i.e. to monitor and analyse the effects of the partnership on the development of a child of preschool age and to work as strongly motivated and professionally trained individuals on building all forms of inclusion of parents in nursery school activities. Based on the set aim, indicative contents and learning outcomes it can be derived that course subject *Partnership between family and nursery school* contributes to the development of competences of future teachers for the partnership with parents. Obligatory literature within this course includes sources that are primarily oriented towards partnership of educational institution and family, namely: Rangelov-Jusovic, Radmila (2007). *From collaboration to partnership. How to build partner relationships between nursery school, school and family*. Sarajevo: COI Step by Step; Wilson, L. (1997). *Partnerships Families and Communities in Canadian Early Childhood Education*, ITP Nelson. Aims, outcomes and program contents stipulated within course subject *Family pedagogy* at the studies of preschool education at the Islamic pedagogical faculty in Zenica, are aimed towards fundamental knowledge about the family and family upbringing, but one part of the contents covers the role of partner relationship between family and school/nursery school, and advisory work aimed towards improving family relations and child upbringing. The intention is for the students to be trained to follow and assess preschool children's family situations through various activities, and, accordingly, organise their own educational work, and to help parents as

professionals with a more quality organization and practice of family upbringing organizing advisory work with parents, children, as well as their families as wholes. Within stipulated literature for this course there are sources that partly relate to the partnership between educational institution and family. When it comes to the course subject *Family pedagogy* that students of preschool education take at the Faculty of pedagogy in Bihac, the aim is to provide students with acquiring basic professional competences from the area of family pedagogy and mastering the skills of application of acquired knowledge in practice (Table 1). Aside from the contents relating to family and family upbringing, students are, also, introduced to basic starting points in building partnerships between educational institution and family. Accordingly, aims, course contents and expected learning outcomes are aimed towards development of competences for creating a plan of improvement of partnership between family and school. Obligatory literature includes one source that is partly aimed towards studying the partnership between educational institution and family (Pasalic-Kreso, A. (2011). *Coordinates of family upbringing, a contribution to the systemic approach to understanding of family and family upbringing*. Sarajevo: Dobra knjiga). The indicators that relate to study programs of preschool education at public Universities in the Federation of Bosnia and Herzegovina, and regard the representation of course subjects from the domain of family upbringing and their directionality towards the development of competences of teachers/educators from the area of partnership between educational institution and family, indicate that the course subjects *Family pedagogy* at the University in Sarajevo, *Family pedagogy* at the University in Tuzla, *Partnership between family and nursery school* at the University in Zenica, and *Family pedagogy* at the University in Bihac are partly aimed towards development of educators' competences for partnership with parents. Researching the representation of course subjects of family pedagogy and working with parents at the preschool education studies at Teaching faculties in the Republic of Croatia and the status that these course subjects have according to the criteria: existence of the course, status of the course, number of ECTS points, aims of the course, course contents, forms of lesson realization, grading and expected competences, Males et al. (2008) arrived at the results which are similar to the ones presented in this paper. Namely, the indicators that the authors arrived at showed the existence of great diversity at certain universities considering the representation of study courses aimed at studying family upbringing in programs of teacher education, and considering the status that these subjects have according to the obligation criteria, number of semesters they are taken, anticipated hours per semester and number of ETCS points. The same is confirmed by results reached by Ljubetic et al. (2008). Visnjic Jevtic (2018) also came to similar conclusions examining educator's self-assessment of competencies for cooperation with parents and its correlation with education for cooperation with parents, age and work experience. By analysing study programs for educators in the Republic of Croatia it was determined that only three higher education institutions have obligatory course subject that enables students to acquire knowledge and skills necessary for partnerships with parents, and that at other higher education institutions these contents are mostly represented within the course subject Family pedagogy. Within her research, Prce (2018) examined educators' opinions on obstacles in establishing partner relations between parents and preschool institution, and came to the results that educators are dissatisfied with the quality of cooperation with parents, but also with their own competencies in this area, which they find as one of the barriers for establishing a successful partnership with parents. The author attributes the mentioned educators' shortcoming to insufficient dedication to the development of educators' competencies for partnership with parents during initial education.

CONCLUSIONS

Previously completed analysis of the study programs of preschool education shows that only one higher education institution has one obligatory course subject (Partnership between family and nursery school) the aim of which is introducing students with theoretical starting points in the area of partnership with parents. It is the Islamic pedagogical faculty in Zenica. The course subjects that are aimed toward studying family upbringing and partnership between educational institution and family in programs of initial education of educators at certain universities in the Federation of Bosnia and Herzegovina have a different status, regarding their obligation, number of semesters they are taught, as well as number of hours of lessons and practice and the number of ETCS points that are stipulated for them. The analysis of program structure showed that there are courses within which contents of family upbringing and partnership with parents are

covered at faculties that educate future educators in the Federation of Bosnia and Herzegovina. Due to the scope of other contents within those course subjects, the contents aimed at developing competences of educators for partnership with parents cannot be considered sufficient because there is no space for a greater number of thematic units from that area. This is also confirmed by literature, where analysis has shown that within these courses literature aimed towards acquiring knowledge from family pedagogy is dominant, which is in compliance with the course contents, where analysis determined disproportion of contents aimed at family pedagogy and contents relating to partnerships between educational institution and family. The presented research results can be the basis for redesigning course curriculums and programs at public Universities in the Federation of Bosnia and Herzegovina for the purpose of including a greater number of course subjects aimed at preparing future educators for the building of partner relationships with parents. The need for introducing courses that offer adequate education for future educators in establishing partner relationships with parents clearly exists and work should be done on its fulfilment as soon as possible.

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READING OF BLIND STUDENTS

Original scientific paper

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ABSTRACT

The aim of the research was to determine the success of reading Braille graphemes and understanding the read text in congenitally blind students. The research included 61 students: 30 congenitally blind students, 31 students who went blind later in life, aged 7-18, both genders who are in education and rehabilitation in the Centre for Blind and Visually Impaired Children and Youth Nedzarici in Sarajevo and in elementary schools in Tuzla Canton and Brcko District. The obtained results showed that there is no statistically significant difference in the ability to read Braille graphemes, and a statistically significant difference was shown in the understanding of the read text in Braille between congenitally blind students and students who went blind later in life.

***Keywords**: reading, blind students, reading comprehension*

INTRODUCTION

Reading is one of the fundamental communication activities, because it has great importance for individuals and for society as a whole. It provides an experience through which an individual can expand their knowledge, gain a better understanding of themselves and their environment, and develop intellectually, socially and emotionally (Jaegera, 2007). Difficulties at any level will affect the student's success in school and beyond (Hadzic, Tulumovic, 2009). Reading requires the coordination of a series of oculomotor and perceptual processes and the act of understanding. First of all, these are the processes that direct eye movements from location to location, the process of decoding the visual pattern of the word and its meaning, and the process of connecting the semantic and syntactic relations between successive words, phrases and sentences in the text (Roncevic, 2005). Tactile-kinaestheicn perception is indispensable in the cognitive development of a blind child, which is especially reflected in the use of Braille (Vucinic, 2005). Listening cannot completely replace the written word, which also points to the indispensability of reading and writing for blind and partially sighted students. Tactilely, as well as visually, they face the written word and text less often, resulting in slower reading (Dangiulli, Waraich, 2002). In the period of initial reading, comprehension is essentially determined by prior knowledge and experience, and by learning new content with the help of other methods, and not by relying only on the written text (Vances, 1999). In blind people, there are difficulties in the technical mastery of the reading process, which are primarily caused by the successive character of perception typical for the sense of touch, in contrast to the simultaneity that

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dominates the visual perception of people without visual impairment. The success of reading Braille depends on teaching methods, the intellectual development of blind students and the development of perceptual factors (Popovic, 1982). Reading Braille is a skill that requires the use of complex mental processes and is more complex than reading black print. For blind people to master reading, the following are important: speech-language development, auditory perception, development of motor and tactile functions, orientation in space, ability to apply thought operations of analysis and synthesis, level of social and emotional development and motivation (Tulumovic, 2013). Orientation in a small space is an important factor in the use of Braille, but also in the use of tactile maps and other aids for the blind. If a blind student is not able to orient themselves in a small space, most of the information will be unavailable to him. Good orientation in a small space is a basic prerequisite for successfully mastering Braille (Heller, 1999).

RESEARCH OBJECTIVE

The main aim of this research is to examine the success of reading Braille graphemes and understanding the read text in congenitally blind students and students who went blind later in life.

RESEARCH METHODS

Sample of respondents

The sample of respondents consisted of two groups: congenitally blind students and students who went blind later in life, from the population of regular elementary school students in the area of Tuzla Canton who are integrated in regular elementary schools of Tuzla Canton, and the population of the same type of students (same disability) of boarding school in the "Centre for the Blind and Visually Impaired Children and Youth" Nedzarici in Sarajevo. The research included a total of 61 students: 30 congenitally blind students and 31 students who went blind later, of which there were 39 boys and 22 girls aged 7-18, both genders who are in education and rehabilitation at the "Centre for Blind and Visually Impaired Children and Youth" Nedzarici - Sarajevo, and in elementary schools of Tuzla Canton and Brcko District.

Sample variables

An instrument designed by Cvetkovic (1989) was used to test the reading ability of congenitally blind students and students who went blind later in life. The test consists of two subtests: the first subtest for simultaneous recognition of Braille graphemes, the second subtest for reading vertical graphemes, mirror graphemes and graphemes with scattered dots. In examining the reading ability of congenitally blind students and students who went blind later in life, one part of the test adapted for the needs of this research (translated into Braille) was used: "Diagnostic kit for testing the ability of speech, language, reading and writing in children" (Bjelica and Posokhova, 2001). The following tests were used to test reading comprehension: "Sisters", "Lion and Mouse", "Red Sun", "Different Punishments", "Sarka", "Waterfall", "Seagull", "Jonathan Livington" and "Stećak"(medieval Bosnian tombstone).

Method of conducting research and measuring instruments

The research was carried out in the Centre for Blind and Visually Impaired Children and Youth - Nedzarici Sarajevo and elementary schools in Tuzla Canton and Brcko District. Blind students were examined individually. Preparation was carried out in all schools in advance, which consisted of the fact that the method of conducting the test was explained to the children in detail, and the parents of congenitally blind students and students that went blind later in life. School principals and teaching staff were also familiar with the test method. All the material that was used to test the ability to read was adapted to the specific abilities of blind children, i.e. tactile perception.

Statistical data processing

The SPSS 20.0 software package was used for data processing. Statistical significance is considered to be $p < 0.05$. In addition to the calculation of descriptive-statistical parameters, measures of central tendency and variability, a test on the difference (equality) of the arithmetic means of two or more basic sets was used as a parametric test. The non-parametric Mann Whitney test was used to determine the existence of a difference in mean values between two independent samples. An analysis of variance was used to test the existence of a difference in mean values between groups of respondents formed both by age (independent samples) and by other criteria.

RESEARCH RESULTS

Based on the data in Table 1, within the group of congenitally blind students, the average number of points for simultaneous recognition is 28.37 points with an average deviation of 2.36, while the average number of points for vertical graphemes is 9.70 points per student, with an average deviation of 0.84, the average number of points for mirror graphemes is 18.53 points per student, with an average deviation of 2.16, while the average number of points for graphemes with scattered dots is 29.10 points per student, with an average deviation of 1.79. Finally, if we look at the total number of points that congenitally blind students made when reading graphemes, the average number of total points for graphemes is 57.33 points per student with an average deviation of 3.81. Based on everything, we can see that the congenitally blind students had the highest average values for graphemes with scattered dots, during simultaneous letter recognition, followed by mirror graphemes and the lowest average values for vertical graphemes.

Table 1. Mean values and measures of dispersion for the group of congenitally blind students

	Total number of points for simultaneous grapheme recognition	Number of points for vertical graphemes	Number of points for mirror graphemes	Number of points for graphemes with scattered dots	Total number of points for graphemes
N	30	30	30	30	30
Mean	28.37	9.70	18.53	29.10	57.33
Mode	30.00	10.00	20.00	30.00	60.00
Standard deviation	2.36	0.84	2.16	1.79	3.81
Range	12.00	3.00	6.00	6.00	13.00
Minimum	18.00	7.00	14.00	24.00	47.00
Maximum	30.00	10.00	20.00	30.00	60.00
P25	27.75	10.00	18.00	29.25	55.00
P50	29.00	10.00	20.00	30.00	60.00
P75	30.00	10.00	20.00	30.00	60.00
Interquartile range	2.25	0.00	2.00	0.75	5.00

Table 2 presents the results of the group of students who went blind later in life. Within this group, the average number of points for simultaneous recognition is 28.06 points, with an average deviation of 4.80, then the average number of points for vertical graphemes is 9.55 points per student, with an average deviation of 1.34, and then the average number of points for mirror graphemes is 18.71 points per student, with an average deviation of 3.67, while the average number of points for graphemes with scattered dots is 28.35 points per later blinded student, with an average deviation of 5.47. Finally, if we look at the total number of points that this group of students made for graphemes, the average number of total points for graphemes is 56.61 points per student with an average deviation of 10.22. At the end of the analysis, we can see that this group of students achieved the highest average values for graphemes with scattered dots, followed by simultaneous recognition of letters, and for mirror graphemes and the lowest average values for vertical graphemes. If we look at the average values of congenitally blind and students who went blind later, we can conclude that both groups achieved the highest average values for the same graphemes.

Table 2. Mean values and measures of dispersion for the group of students who went blind later in life

	Total number of points for simultaneous grapheme recognition	Number of points for vertical graphemes	Number of points for mirror graphemes	Number of points for graphemes with scattered dots	Total number of points for graphemes
N	31	31	31	31	31
Mean	28.06	9.55	18.71	28.35	56.61
Mode	30.00	10.00	20.00	30.00	60.00
Standard deviation	4.80	1.34	3.67	5.47	10.22
Range	26.00	7.00	20.00	30.00	57.00
Minimum	4.00	3.00	0.00	0.00	3.00
Maximum	30.00	10.00	20.00	30.00	60.00
P25	28.00	10.00	18.00	30.00	56.00
P50	30.00	10.00	20.00	30.00	60.00
P75	30.00	10.00	20.00	30.00	60.00
Interquartile range	2.00	0.00	2.00	0.00	4.00

Table 3 presents the results in reading abilities for the simultaneous recognition of Braille graphemes between congenitally blind and students who went blind later in life, where we can see that the range of variation in the congenitally blind in the number of points in simultaneous recognition ranged from 7-10, the group median was 9.50. The range of variation in the students who went blind later for the same variable ranged from 1-10, the group median was 10. Also in the congenitally blind in the number of points for the simultaneous recognition of second-order graphemes, the range of variation ranged from 5-10, the group median was 10. The range of variation in students who went blind later for this variable ranged from 1-10, the group median was 10. While for the number of points achieved in the simultaneous recognition of graphemes of the third order, the range of variation ranged from 6-410, the group median was 10. Students who went blind later for the same variable had a range of variation from 2 to 10, the group median was 10. According to the results, we can see that there is no statistically significant difference in the number of points achieved in reading performance for the simultaneous recognition of Braille graphemes in congenitally blind students and students who went blind later in life.

Table 3. Results of the testing of the hypothesis about the existence of a difference in reading ability for the simultaneous recognition of Braille graphemes between congenitally blind students and students who went blind later.

Variables	**Congenitally blind students**	**Students who went blind later**	**Mann-Whitney U test ****	**P**
	Median (rank)	**Median (Rank)**		
Number of points for simultaneous recognition of Braille graphemes - first row	9.50 (7 – 10)	10 (1 – 10)	424.50	0.513
Number of points for simultaneous recognition of Braille graphemes - second row	10 (5 – 10)	10 (1 – 10)	424.00	0.470
Number of points for simultaneous recognition of Braille graphemes - third row	10 (6 – 410)	10 (2 – 10)	448.5	0.699

Looking at Table 4, we can see that the range of variation in the number of points for the congenitally blind when reading Braille vertical graphemes ranged from 7-10, the group median was 10. On the same variable, students who later went blind had a range of variation that ranged from 3-10, the group median was 10. Based on the obtained results, we can see that there is no statistically significant difference in the ability to read Braille vertical graphemes between congenitally blind students and students who went blind later.

Table 4. Results of testing the hypothesis about the existence of a difference in the ability to read Braille vertical graphemes between congenitally blind students and students who went blind later

Variables	Congenitally blind students	Students who went blind later	Mann-Whitney U test **	P
	Median (rank)	Median (Rank)		
Number of points in Braille vertical graphemes	10 (7 – 10)	10 (3 – 10)	440.50	0.583

Looking at Table 5, we can see, based on the results obtained in the examination of the ability to read Braille mirror graphemes between congenitally blind students and students who went blind later, that congenitally blind students had a range of variation on the variable in the success of reading Braille mirror graphemes ranged from 14-20, the group median was 20. Students who went blind later had a range of variation of 0-20 on the variable of reading Braille mirror graphemes, the group median was 20. Looking at table 5, we see that there is no statistically significant difference in the ability to read Braille mirror graphemes between the two groups of students.

Table 5. Results of testing the hypothesis about the existence of a difference in the ability to read Braille mirror graphemes between congenitally blind students and students who went blind later

Variables	Congenitally blind students	Students who went blind later	Mann-Whitney U test **	P
	Median (rank)	Median (Rank)		
Number of points in Braille mirror graphemes	20 (14 – 20)	20 (0 – 20)	404.00	0.296

According to the results shown in Table 6, where the range of variation in the number of points in reading Braille graphemes with scattered dots in the congenitally blind, ranged from 24-30, the group median was 30. The range of variation in the students who went blind later for the same variable ranged from 0-30, the group median was 30. Based on the obtained results, we see that there is no statistically significant difference in the ability to read Braille graphemes with scattered dots between the two groups of students.

Table 6. Results of testing the hypothesis about the existence of a difference in the ability to read Braille graphemes with scattered dots between congenitally blind students and students who went blind later

Variables	Congenitally blind students	Students who went blind later	Mann-Whitney U test **	P
	Median (rank)	Median (Rank)		
Number of dots in Braille graphemes with scattered dots	30 (24 – 30)	30 (0 – 30)	462.50	0.961

The results of the statistical processing of the data shown in Table 7, where we can see that students who later went blind compared to congenitally blind students were significantly better at understanding the read text, which can be seen on the SHVAT-SADR-ISPR-ODG variable

(The child completely understood the content and sense of what was read and gave correct and complete answers to all questions) 24 of them (77.42%), respectively, and congenitally blind 15 of them (50.00%), while on the variable DJEL-RAZ-PROČ (The child partially understands what is read, gives incomplete explanations, but manages to give the correct answer to auxiliary questions) congenitally blind students were slightly more represented, 8 of them (26.67%), while students who went blind later, 6 of them (19.35%) were less represented. Looking at the table, it can be seen that the students who went blind later fully understood the read text compared to the congenitally blind students, where 2 of them (6.67%) were not able to understand the read text. Also 5 of them i.e. (16.67%) were not able to understand the read sentence. Based on everything, this is also shown by the p-value, which is less than $p < 0.05$, and we conclude that there is a statistically significant difference between the ability to read and understand the read text between congenitally blind students and students who went blind later. It can be seen that among congenitally blind students there are more of them who partially understand what was read, while among students who went blind later there is a greater representation of those who fully understood the content and meaning of what was read and gave a correct and complete answer.

Table 7. Differences in the ability to read and understand the read text in congenitally blind students and students who went blind later

Variables	Congenitally blind students		Students who went blind later		Total	
	f	%	f	%	f	%
SHVAT-SADR-ISPR-ODG	15	50.00	24	77.42	39	63.93
DJEL-RAZ-PROČ	8	26.67	6	19.35	14	22.95
NE-RAZ-PROČ	2	6.67	0	0.00	2	3.28
NE-RAZ-PROČ-REČ	5	16.67	0	0.00	5	8.20
NE-RAZ-PROČ-RIJ	0	0.00	1	3.23	1	1.64
TOTAL	30	100.00	31	100.00	61	100.00
$\chi^2 = 10.349;\ \nu = 4;\ p < 0.035;$						

DISCUSSION

Blind students have a hard time mastering the reading process, which indicates that the students are not tactilely "matured". Difficulties in reading are caused by the wrong reading of letters, i.e. those letters that are processed the latest or not enough time is devoted to determining them: dž, ć, nj, đ, which belong to the vertical projection and due to poor perception and insufficiently developed and undifferentiated voice image of the letters such as: č-ć, đ-đ, š-s, n-nj. The consequence of these difficulties, which is reflected in reading, is that during reading the student pays more attention to the perception of letter recognition, and loses the orientation of the order in reading. Tulumovic (2007) investigated the existence of a difference in the success of reading and writing Braille vertical graphemes in congenitally blind students and students who went blind later, who were integrated in regular schools of the Tuzla Canton, the results showed that there is no statistically significant difference i.e. that the groups of congenitally blind students and students who went blind later do not differ in the success of reading and writing Braille vertical graphemes. However, statistically significant differences were shown in the success of reading and writing Braille mirror graphemes and Braille graphemes with scattered dots between the two groups of students. Carreiras and Alvarez, (1999) examined the process of understanding the reading of Braille on a sample of 26 congenitally blind people, and it was shown that reading Braille directly depends on the length of the word, the frequency of occurrence and the repetition of that word in the text. Long and rare words are less understood (Cunningham, 1993). Baker et al. (1995) examined the relationship between the variables of the Test for Assessment of Learning Success and Braille Reading Comprehension on a sample of 30 respondents. The obtained results showed that success is significantly related to chronological age, duration of damage, intelligence and educational achievement. Tulumovic et al. (2011) examined the educational achievements of students with visual impairment, in the area of

reading and writing, through the application of individualized educational programs in a regular school. The aim of the research was to examine: reading quality, reading speed, intonation, pace, rhythm and understanding of what was read, along with a text adapted to the child's individual abilities. In the initial phase, the child read the text correctly, but much slower, with irregular tempo and intonation, and disregarding the intonation meaning of punctuation. Furthermore, the results showed that the child understands the read words, sentences and text, but omits parts of the content when retelling independently. Furthermore, the systematic flow of the plot is missing; the introductory, main and final parts of the text are replaced. The child names the characters correctly, but omits the characters' traits when describing them. The child looks at the text while retelling. Reading the text is aimed at obtaining data on the understanding of what is read (Medenica, 2003). Tactile ability is very important for the tactile recognition of Braille's six dots as a symbol with a specific meaning (Tulumovic, 2008). Persons with reduced intellectual abilities are unable to successfully master reading and writing Braille (Nolan, 1969).

CONCLUSION

Based on the results of the research, we can see that there was no statistically significant difference in reading ability for simultaneous recognition of Braille graphemes, Braille vertical graphemes, Braille mirror graphemes, Braille graphemes with scattered dots between congenitally blind students and students who went blind later in life. These two groups differ in understanding the text read in Braille. Congenitally blind students were less successful in reading and reading comprehension compared to the students who went blind later. The reason for the better achievements of students who went blind later in life compared to the congenitally blind group should be sought first of all in a well-developed tactile-kinaesthetic perception.

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SPATIAL ANALYSIS OF MORTALITY IN BOSNIA AND HERZEGOVINA: A PRELIMINARY ANALYSIS

Original scientific paper

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ABSTRACT

In this study, using the methods of spatial autocorrelation in geographic information systems (GIS), an analysis of the spatial distribution of mortality rates in Bosnia and Herzegovina was performed in order to identify high-risk areas with increased mortality and depopulation. Spatial analysis is based on the calculation of global (Global Moran's I and Getis-Ord General G) and local (Anselin Local Moran's I and Getis-Ord Gi) statistical indices of spatial autocorrelation. The values of global statistical indices confirmed a clustering of high mortality values, while local statistical indices confirmed high mortality rates in the municipalities of northwestern and eastern Bosnia and Herzegovina. Conducted research provides an insight into spatial patterns of demographic processes, while results obtained by this research are significant for demographic development and future spatial demographic research in Bosnia and Herzegovina.*

Keywords: *GIS, spatial analysis, spatial autocorrelation, mortality, Bosnia and Herzegovina*

INTRODUCTION

Due to the effects of mortality on demographic change, social, economic, and other processes in the world, in both developed and developing countries, there are numerous studies researching this demographic phenomenon (Lovic Obradovic et al., 2020; Xiang & Song, 2016; Ouellette et al., 2012). Furthermore, numerous studies monitor spatial disparities in the levels and causes of mortality since there are significant regional differences in the level of mortality in the world (Gavurova & Toth, 2019; Atanasova et al., 2016; Kibele et al., 2015; Kalogirou et al., 2012; Wang et al., 2012). In demographic analysis, and thus in the analysis of mortality trends and spatial differences in the level and causes of mortality of a particular area, spatial analysis in the geographic information system (GIS) environment is of particular importance (Lovic Obradovic et al., 2020; Mijic & Ateljevic, 2018; Arslan et al., 2013; Rodrigues et al., 2013; Weeks, 2004; Anselin & Getis, 1992). There are numerous studies in the world of spatial analysis of mortality. Atanasova et al. (2016) identified spatial disparities in Bulgarian mortality in the period 2000-2012. Kalogirou et al. (2012) investigated spatial differences in Greek mortality according to causes of mortality in the period 2006-2008. Wang et al. (2012) researched the geographical disparities of infantile mortality rates in rural China. Arslan et al. (2013) conducted a spatial analysis of perinatal mortality in Turkey. Rodrigues et al. (2013) used spatial analysis to identify areas of high infantile mortality rates in Brazil. Buajitti et al. (2019) conducted a spatial analysis of early mortality variations

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in Ontario (Canada). Oliveira Santos et al. (2017) performed a spatial-temporal analysis of mortality caused by suicide within the old population in Brazil. Ocaña-Riola & Mayoral-Cortés (2010) identified spatio-temporal mortality trends in the municipalities of southern Spain. Divino et al. (2009) determined the geographical patterns of mortality in Italy, etc. Therefore, in recent years, spatial analysis has contributed to significant geographical insights through numerous geographical studies (Buajitti et al., 2019; Xiang & Song, 2016; Almeida et al., 2014; Divino et al., 2009). There are few studies on the spatial distribution and disparities of mortality in Bosnia and Herzegovina. However, some studies have been conducted on the crude mortality rates and demographic trends of this country and its individual regions. Mijic & Ateljevic (2018) conducted a study on the use of modern GIS software in demographic research of the Bosnian entity of Republic of Srpska; Gekic et al. (2020) investigated depopulation trends in Bosnia and Herzegovina at the end of the XX and the beginning of the XXI century; Kadusic (2013) researched the trends of mortality rates in the municipality of Tešanj in Bosnia and Herzegovina; Fatusic et al. (2012) conducted a research about perinatal mortality in Tuzla Canton; Fatusic et al. (2005) analysed the impact of the 1992-1995 war on perinatal and maternal mortality in Bosnia and Herzegovina, etc. Therefore, it should be noted that in the previous research on this demographic phenomenon in Bosnia and Herzegovina, spatial analysis has not been significantly applied. Spatial analysis of mortality can be performed using the method of spatial autocorrelation, which includes statistical and graphical techniques that enable geovisualization of the spatial distribution of data and determination of atypical locations and outliers, spatial patterns, etc. (Hasani et al., 2019; Anselin, 1995; Ord & Getis, 1995; Anselin & Getis, 1992). In the background of this research is the assumption that certain areas of Bosnia and Herzegovina are especially endangered by high death rates and depopulation. Therefore, the aim of this study is to conduct a spatial analysis of mortality rates in Bosnia and Herzegovina using spatial autocorrelation methods in geographic information systems in order to identify spatial patterns and clusters of high mortality rates and areas vulnerable to depopulation processes.

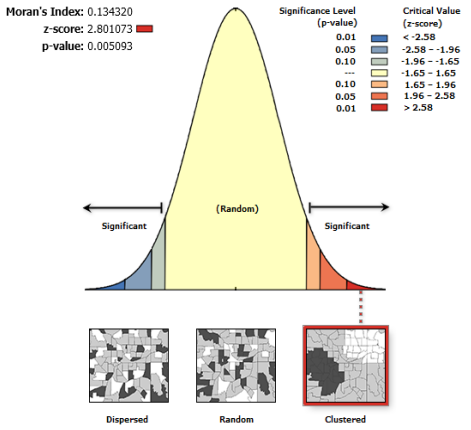
RESEARCH MATERIALS AND METHODS

The analysis of health and geographical spatial data enables a better understanding of the mortality of a certain population and the mapping of areas of social and health inequalities (Rodrigues et al., 2013), while the spatial pattern analysis of demographic phenomena, including mortality, improves understanding of demographic processes and emphasizes the significance of spatial statistical techniques in the spatial analysis of demographic phenomena (Kurek et al., 2021). Taking into account the high mortality rates of the population of Bosnia and Herzegovina, it is necessary to determine the high-risk areas of increased mortality rates in the country. Statistical data gathering at the level of smaller territorial units of Bosnia and Herzegovina, such as municipalities and settlements, is difficult and complicated for several reasons, the most significant of which is the inconsistency of the statistical data monitoring caused by the administrative division of this country, and due to the fact that in the post-war period (1992-1995) only one population census was conducted in 2013. Therefore, a preliminary geospatial analysis of mortality in Bosnia and Herzegovina was conducted for the period 2013-2020, using statistical estimates of crude mortality rates from the Agency for Statistics of Bosnia and Herzegovina (BHAS), the Federal Bureau of Statistics (FZS) and the Bureau of Statistics of the Republic of Srpska (RZSRS). Digital data related to the territory of municipalities in Bosnia and Herzegovina was retrieved from the Federal Geodetic Administration (FGA) in vector format (*shp) in the form of polygons. In order to perform spatial analysis of demographic parameters in Bosnia and Herzegovina at the municipal level, crude death rates and other demographic indicators, such as birth rates, natural population change rates, age coefficient, and vital index were determined for 142 municipalities in Bosnia and Herzegovina over a period of 8 years (2013-2020). In this study, the spatial autocorrelation method was used to identify spatial clusters with high or low mortality values in Bosnia and Herzegovina. Spatial autocorrelation is an indicator for determining the correlation between different variables and can be defined as the degree to which variables in certain locations are similar or different to those in the vicinity (Hasani et al., 2019; Anselin, 1995; Ord & Getis, 1995). There are global statistical tools that determine whether or not there is clustering of spatial data, and local statistical tools that give us an answer to the question of where spatial clustering in the researched area occurs, and whether low or high values are clustered (Hasani et al., 2019). In this study, spatial autocorrelation indices were used to determine whether or not mortality clusters occur in Bosnia and Herzegovina, i.e., high-risk areas that are exposed to high mortality rates. Global statistical indices, such as Global

Moran's I and Getis-Ord General G, can be used to analyse spatial autocorrelation through an entire dataset or statistical sequence, whereas local statistical indices of spatial autocorrelation, such as Anselin Local Moran's I and Local Getis-Ord Gi*, can be used to identify hot and cold spots areas (Vilinová, 2020; Hasani et al., 2019; Xiang & Song, 2016; Ord & Getis, 1995). Therefore, in this study, i.e., in the analysis of spatial patterns and spatial autocorrelation of mortality in Bosnia and Herzegovina, global statistical indices Global Moran`s I and Getis-Ord General G, and local statistical indices of spatial autocorrelation Anselin local Moran's I and Getis-Ord Gi* were used. The value of the global Moran's I Index ranges between -1 and +1. Analysis starts from the null hypothesis, which states that there is no spatial autocorrelation between variables. The statistical significance of the global Moran's I Index was determined on the basis of *p*-value and *z*-score. If the value of this index is significant and positive, the value of the index will range between 0 and +1, which indicates a positive spatial autocorrelation and spatial clustering of values or data. If the global Moran's I indicator is statistically significant and negative, its value will range between 0 and -1 and will indicate a negative spatial relationship between the values and the dispersion of the data. The Global Getis-Ord General G Index examines the clustering of low-risk or high-risk values. If the clustering is confirmed by rejecting the null hypothesis, a positive *z*-score for Getis-Ord General G indicates a clustering of high values, while a negative *z*-score indicates a clustering of low values. The Anselin Local Moran's I indicator can also be used to determine the clustering of low and/or high values. The statistically significant and positive value of this index shows us where in the area of research high and low values are clustering, while the negative index value indicates atypical points or outliers (low-high, high-low values). The Local Getis-Ord Gi* Index of spatial autocorrelation was also used in the study. The high *z*-score and low *p*-value of this index indicate the clustering of high values (hot spots), and the low negative *z*-score and low *p*-value indicate a significant clustering of low values (cold spots). The higher (or lower) the value of the *z*-score is, the more intensive the clustering of data is.

RESULTS

A *p*-value of 0.005 for Global Moran's I and a *p*-value of 0.002 for Getis-Ord General G imply that the null hypothesis is rejected and that the spatial distribution of high and/or low values in the observed statistical dataset of mortality rates in Bosnia and Herzegovina is more clustered than would be expected in random spatial processes. Further, given a *z*-score of 2.801 for Global Moran's I and a *z*-score of 2.982 for Getis-Ord General G, there is less than a 1.0% probability that this spatial distribution of mortality rates could be the result of chance. As a result, Global Moran's I of 0.134 (positive *z*-score of 2.801 and *p*-value of 0.005) and Getis-Ord General G value of 0.007 (positive *z*-score of 2.982 and statistically significant *p*-value of 0.002) confirm the clustering of mortality rates in Bosnia and Herzegovina (Figs. 1 and 2).



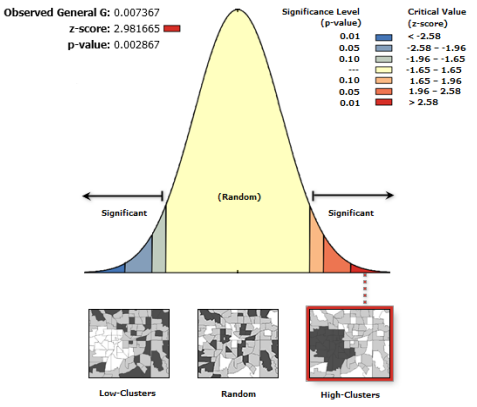
Given the z-score of 2.801073205, there is a less than 1% likelihood that this clustered pattern could be the result of random chance.

Global Moran's I Summary	
Moran's Index:	0.134320
Expected Index:	-0.007092
Variance:	0.002549
z-score:	2.801073
p-value:	0.005093

Figure 1: Global Moran's I final statistics and diagram for mortality rates in B&H, 2013-2020

The local statistical indices Anselin Local Moran's I and Getis Ord Gi* enabled the identification or existence of spatial clusters with high or low mortality values in Bosnia and Herzegovina. The statistical significance of local indices is based on the ratio of the *z*-score and *p*-value at the 0.05 significance level. Moran's diagram for the mortality of the population of Bosnia and Herzegovina in the period 2013-2020 shows the value of the Anselin Local Moran's I at a value of 0.134, which indicates moderate positive spatial autocorrelation. This value of the index indicates the clustering of high and low values of mortality rates. Moreover, positive autocorrelation suggests that values in one geographic area are similar to the values in neighbouring areas, while negative autocorrelation indicates atypical points or outliers, i.e., certain areas with high mortality

rates are surrounded by areas with low mortality rates, and vice versa (Figs. 1, 2 and 3). The municipalities of Bosnia and Herzegovina identified in the high-high quadrant are Novi Grad, Prijedor, Krupa na Uni, Ostra Luka, Bosanski Petrovac, Ribnik, Drvar, Glamoc, Kupres, Pale (RS), Foca (FB&H) and Gacko, while in the low-low quadrant are Velika Kladusa, Zenica, Busovaca and Bratunac. The municipalities of Bosnia and Herzegovina registered in the low-high quadrant are Sanski Most, Kljuc, Banja Luka, Donji Vakuf, Livno, Trnovo (FB&H) and Trnovo (RS), while only the municipality of Sekovici is in the high-low quadrant (Fig. 3).



Given the z-score of 2.9816653426, there is a less than 1% likelihood that this high-clustered pattern could be the result of random chance.

General G Summary	
Observed General G:	0.007367
Expected General G:	0.007092
Variance:	0.000000
z-score:	2.981665
p-value:	0.002867

Figure 2: Getis-Ord General G final statistics and diagram for mortality rates in B&H, 2013-2020

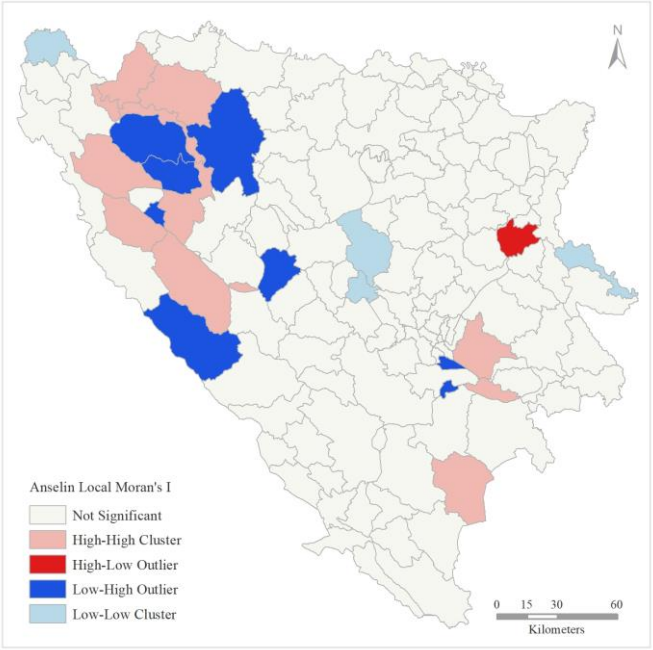


Figure 3: Analysis of local spatial autocorrelation of mortality rates in Bosnia and Herzegovina, 2013-2020

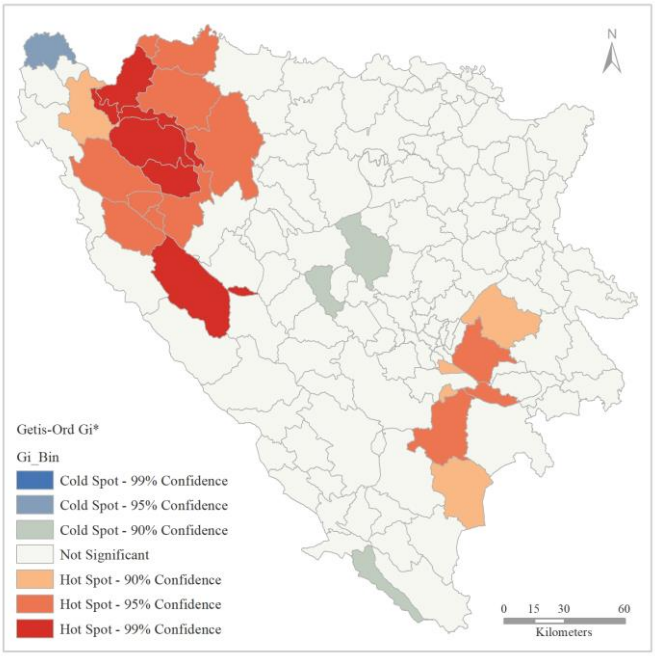


Figure 4: Getis-Ord G analysis of mortality rates in Bosnia and Herzegovina, 2013-2020*

The Getis-Ord Gi* Index was used to identify high-risk and low-risk areas of mortality and depopulation in Bosnia and Herzegovina. The Gi* was calculated for each data point in the statistical mortality dataset. Hot spots with 99% confidence intervals (municipalities of Novi Grad, Krupa na Uni, Ostra Luka, Sanski Most, Kljuc, Glamoc and Kupres) and 95% confidence intervals (municipalities of Kostajnica, Kozarska Dubica, Prijedor, Banja Luka, Ribnik, Petrovac, Istocni Drvar, Drvar and Bosanski Petrovac) were identified in the north-western parts of Bosnia and Herzegovina. A hot spot cluster with a 95% confidence interval was also identified in the eastern parts of Bosnia and Herzegovina (Pale and Kalinovik municipalities in the Republic of Srpska, and Foca in the Federation of Bosnia and Herzegovina) (Fig. 4). Spatial clustering of high mortality rates in some areas of Bosnia and Herzegovina is a consequence of numerous factors, the most significant of which are social, economic, and political factors. These factors caused negative natural population change, an increase in the share of the elderly population, intensive emigration of the young population (mostly between 20 and 40 years of age), and therefore a decline in the potential biodynamics and vitality of the population, etc. These adverse demographic trends are especially aggravated in rural municipalities and municipalities that are also situated along the entity demarcation line between entities Federation of Bosnia and Herzegovina and the Republic of Srpska. Furthermore, the mortality trends in this country are also a consequence of certain biological factors, as well as the living standards of the population and the state of the health care and social protection systems. Unfavourable economic, social, political, and other conditions contributed to the decrease of natural population change rates in Bosnia and Herzegovina at the end of the XX and the beginning of the XXI century. Birth rates in Bosnia and Herzegovina have been below 12.0‰ since 1996, and at the same time, there has been a noticeable increase in mortality rates in the period of 1996-2020 from 6.9 to 12.8‰. Despite socioeconomically lagging behind highly developed countries with a low level of reproduction, these statistics show that Bosnia and Herzegovina has entered the post-transition stage of demographic development (Frejka & Sobotka 2008). Since 2010, this country has been recording negative rates of natural population change, which in 2020 reached a value of -5.0‰ (Tab. 1).

Table 1. Natural population change rates in B&H, 1996-2020

Year	Natality rates (‰)	Mortality rates (‰)	NPG rates (‰)
1996	12.8	6.9	5.9
2000	10.5	8.1	2.4
2005	9.0	9.0	0.1
2010	8.7	9.1	-0.4
2013	8.7	10.1	-1.4
2014	8.6	10.2	-1.6
2015	8.5	10.8	-2.3
2016	8.6	10.4	-1.8
2017	8.6	10.8	-2.2
2018	8.4	10.8	-2.4
2019	8.1	11.1	-3.0
2020	7.8	12.8	-5.0

* NPG - Natural Population Change Rate
Source: Agency for statistics of Bosnia and Herzegovina, 2021

Analysis of demographic parameters in Bosnia and Herzegovina for the period from 2013 to 2020 confirmed that there is a strong relationship between mortality and components of natural population change, vital index and age coefficient (moderate negative correlation of -0.514 between mortality and vital index, and a high positive correlation of 0.701 between mortality and age coefficient). Municipalities in Bosnia and Herzegovina with negative natural population change rates, low vitality indexes, and high values of the age coefficient record higher mortality rates (Fig. 5). The highest mortality rates in the period 2013-2020 were recorded in the municipalities of Petrovac (26.7‰), Kupres (FB&H) (25.9‰), Krupa na Uni (24.5‰), Istocni Stari Grad (24.1‰), Kalinovik (23.0‰), etc. At the same time, the largest share of the elderly in the total population was recorded in the municipalities of Kupres (RS) (47.3%), Bosansko Grahovo (36.8%), Drvar (30.5%), Trnovo (29.8%), Kalinovik (28.4%), and the lowest vital index in Pelagicevo municipality (0.042), Donji Zabar (0.067), Ravno (0.100), Bosansko Grahovo (0.172), Istocni Mostar (0.170), Krupa na Uni (0.186), etc. (Fig. 5).

Biological and socioeconomic variables also influence the mortality patterns in Bosnia and Herzegovina. While the birth rate and fertility were mostly influenced by numerous social, economic, and psychological factors, the mortality rate was also significantly influenced by the biological conditions and conditions in the health care of the population of Bosnia and Herzegovina. Among the biological factors, the age structure of the population, the health condition of the population, etc. should be especially emphasized. However, socioeconomic factors also had an impact on mortality. The level of living standards and the state of Bosnia and Herzegovina's health care system are the most important economic and social factors influencing mortality (Kadusic & Suljic, 2018; Kadusic, 2013).

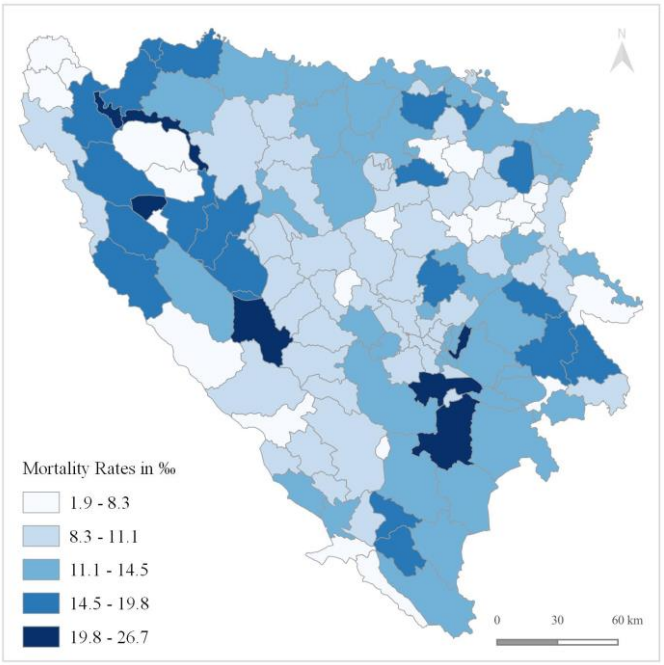


Figure 5: The distribution of mortality rates by municipalities in Bosnia and Herzegovina, 2013-2020

The level of mortality is strongly impacted by the age of the population, and it is logical that mortality affects older population groups more. Based on the share of the population older than 65 in the total population, it is possible to determine the level of age of a certain population. In 2013, the age coefficient was 14.3%, and in 2020 it was 17.9%, which implies that the population of Bosnia and Herzegovina has reached an advanced demographic age and a decline in the potential biodynamics of the population. The decline in the vitality of the population of Bosnia and Herzegovina is also indicated by the vitality index, whose value in 2013 was 0.869 and in 2020 0.618. The demographic ageing and decline of the potential biodynamics of the population of Bosnia and Herzegovina have been influenced by the reduction of birth rates and emigration of the population. Emigration, mainly of the younger population aged 20-40, is reflected in the reproduction of the population and thus in the age composition and mortality of the population of Bosnia and Herzegovina (Gekic et al., 2020; Kadusic & Suljic, 2018). Mortality is also a significant indicator of socio-economic processes and the conditions of the sanitary and health care of the population. To a certain extent, the level of mortality in the population of Bosnia and Herzegovina is also influenced by bio logical and medical factors, which include various inherited traits that make individuals or groups of the population prone to certain diseases. In 2020, the leading causes of mortality in Bosnia and Herzegovina were diseases of the circulatory system (45.1%) and neoplasms (17.7%) (BHAS, 2021).

DISCUSSION

Numerous studies on the level and causes of mortality have been conducted worldwide (Lovic Obradovic et al., 2020; Ouellette et al., 2012), with special emphasis on studies that indicate spatial disparities and variations in mortality in some parts of the world (Gavurova & Toth, 2019; Atanasova et al., 2016). The results of this study confirmed that spatial analysis in a GIS environment is a very effective tool in determining spatial distribution, spatial disparities, and clustering of mortality values, and the data obtained by this analysis contribute to a better understanding of mortality trends and factors influencing this demographic phenomenon (Buajitti et al., 2019; Hasani et al., 2019; Mijic & Ateljevic, 2018; Arslan et al., 2013; Anselin & Getis, 1992). This study presents the preliminary geospatial analysis of crude mortality rates in Bosnia and Herzegovina, conducted by the method of spatial autocorrelation, i.e., global (Global Moran's I and Getis-Ord General G) and local (Anselin Local Moran's I and Getis Ord Gi*) statistical indices

of spatial autocorrelation. Spatial autocorrelation enables the determination of correlation between different variables and indicates spatial disparities, i.e., whether there is clustering of data in the researched area or not (Kurek et al., 2021; Lovic Obradovic et al., 2020; Hasani et al., 2019; Anselin, 1995; Ord & Getis, 1995). Therefore, a significant number of papers in the world treat the issue of spatial disparities in the level of mortality with the use of spatial autocorrelation methods (Buajitti et al., 2019; Hasani et al., 2019; Xiang & Song, 2016; Rodrigues et al., 2013). Global statistical indices confirmed the clustering of mortality rates, while local statistical indices indicated that mortality rates in some municipalities in northwestern and eastern Bosnia and Herzegovina were higher than the mean mortality rates at the level of Bosnia and Herzegovina, and therefore these areas are considered high-risk areas. The causes of spatial disparities in the level of mortality in Bosnia and Herzegovina are numerous, and the most important are social, economic, and political factors. These factors significantly influenced the demographic processes and trends of the population of Bosnia and Herzegovina at the beginning of the 21st century. The most significant demographic problems in this country are population ageing and intensive emigration of the young population of Bosnia and Herzegovina to Western European countries and other countries (Gekic et al., 2020; Kadusic & Suljic, 2018). In addition to the abovementioned factors, it is necessary to single out biological factors and the health of the population of Bosnia and Herzegovina, as well as the quality of the health care system in Bosnia and Herzegovina (Tokalić et al., 2021; Ivanković et al., 2010; Masic et al., 2006). The presence of hot-spot areas or clusters of high mortality rates indicates that certain parts of Bosnia and Herzegovina are particularly vulnerable to depopulation processes. Rural municipalities in Bosnia and Herzegovina, as well as municipalities located along the entity boundary line between entities of the Federation of Bosnia and Herzegovina and the Republic of Srpska, are particularly affected by these unfavourable demographic trends. Although there is an inconsistency in the methodology of collecting and publishing statistical data at the level of administrative entities in Bosnia and Herzegovina caused by the administrative and political organization of this country, the spatial analysis enabled the identification of spatial disparities in the level of mortality of the population of Bosnia and Herzegovina.

The results obtained by this study represent a significant contribution and prerequisite for future demographic research, as well as the basis for the planned demographic development of Bosnia and Herzegovina. The conducted research is significant in terms of determining the depopulation areas of Bosnia and Herzegovina, which are caused by high mortality rates, demographic ageing, and intensive emigration processes. The results of the research can serve for further identification and research of factors that cause spatial disparities in the level of mortality and can also serve as a basis for future research on not only mortality rates but also other demographic parameters in Bosnia and Herzegovina. Therefore, the focus of future research should be on the spatial analysis of standardized mortality rates and the identification and elucidation of the factors that caused the spatial variations in mortality and depopulation processes in Bosnia and Herzegovina.

CONCLUSION

The spatial autocorrelation method confirmed the spatial disparities in the values of mortality rates in Bosnia and Herzegovina. Global statistical indices of spatial autocorrelation indicated a moderate positive autocorrelation, while local statistical indices indicated a clustering of high mortality values in the municipalities of north western and some municipalities in eastern Bosnia and Herzegovina. The spatial clustering of high mortality rates in some areas of Bosnia and Herzegovina is a consequence of numerous social, economic, and political factors. These factors contributed to negative demographic trends throughout the country, particularly in rural municipalities (negative natural population change, high share of elderly population, decline in vital index, i.e., decline in potential biodynamics and vitality of the population, intensive emigration of people aged 20 to 40, and so on). Furthermore, the mortality trends in this country are a consequence of certain biological factors, as well as the living standards of the population and the state of the health care and social protection systems. The results obtained by this research are significant from the aspect of future demographic development and can also serve as a basis for future geospatial demographic research in Bosnia and Herzegovina.

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INTERNET ADDICTION AND LEVEL OF ANXIETY AMONG SCHOOL STUDENTS

Original scientific paper

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ABSTRACT

Internet Addiction is a rising problem among the Indian school students. The purpose of this research was to find out the extent of internet addiction among higher secondary level school students and the anxiety of higher secondary level school students having different levels of internet addiction. The research was conducted on 600 students of CBSE schools in Bhopal. The information was collected by Internet Addiction Scale and General Anxiety Scale. The findings revealed that 10% had normal level of internet addiction, 56% had mild level of internet addiction, 33% had moderate level of internet addiction and just 1% had severe level of internet addiction, the lower the level of internet addiction the lower will be the anxiety of the higher secondary level school students and girls are found to have significantly higher anxiety than boys.

Keywords*: anxiety, gender, higher secondary level, internet addiction, school students*

INTRODUCTION

Ivan Goldberg, psychiatrist in the New York was the first person who suggested the term internet addiction. He explained a symptom list for this as 'Internet Addiction Disorder' in 1995, which is similar to the conditions for substance dependence mentioned in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV). He further described that pathological compulsive internet use can be used to define problematic, excessive, or mal-adaptive usage pattern of the internet. The other popular term for Internet addiction is pathological internet use. It is a type of impulse control disorder. Individuals who are using internet either lack in social skills or use it to avoid problems in their lives. American Psychiatric Association (1995) clearly defined that Internet Addiction is related to the pattern of using the internet which results in functional disorders and unpleasant inner emotional state for a duration of two months. An individual can be diagnosed by applying seven criteria. It is necessary that an individual should satisfy at least three criteria for two months. Tolerance, withdrawal symptoms, internet use for longer than intended, continuous inclination to control behaviour, a significant portion of time is spent on activities related to internet use and other important offline activities related to socialisation, occupation, and recreation are either given up or reduced as a result of internet use, and regular use of the internet without knowing its drawbacks is among them. Kimberly Young (1996) was the first person who conducted a deep study in the area of internet addiction. She explained the prominent symptoms for diagnosing the problem. These are

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excessive mental exertion on internet, spends more time even though being planned to spend few minutes, experiences some health issues due to spending hours in front of the screen , endlessly waiting for the next connection time, feels more comfortable in contacting with people over internet than face – face interaction, feels a constant craving for checking e-mails whether there is something new, decrease meals, or downfall in work effectiveness due to using internet or staying linked, spreads the mail address and chat room names to everybody, always feel sleepless and drained because of late night work over the internet , fails to decrease the excessive internet use , withdrawal syndrome due to lessening the internet usage. Individual also hides the usage of internet from the family members, therapists and others to stay linked with the internet. Behavioural addictions should also be explored and genuine studies will bring forth the relevant facts. The fourth and the last edition of Diagnostic and Statistical Manual of Mental Disorders, (DSM-4-TR) introduced the internet addiction as set of "Impulse Control Disorders not specified as another kind" and the same disorder was classified under the same group in the next edition of 2011 (APA, 2000). Internet addiction occurs when an individual is unable to control the use of the internet, which ultimately causes psychological, social, academic and work-related problems in a person's life. (Chou & Hsiao, 2000). Young (1998) Internet Addiction (IA) involves various computer or internet activities in which an individual spends more time or it also includes the want to spend time on these activities. These include: Cyber-sexual addiction - use of adult chat rooms or cyber-porn;

Cyber-relationship addiction - over involvement in online relationship; Net compulsions - online gambling, virtual casinos etc.; Information overload - compulsive web surfing or searches and Computer addiction - obsessive computer games. (as cited in Alam, 2014, p.623)

It is also observed that while performing online activities addicted young adults feel happy, electrified and attractive. But in offline conditions they feel unhappy, frustrated, anxious, irritated, and uncomfortable. These emotions support the compulsive behavior and generates a painful effect in young adults (Young,1998). During the span of life, every human being feels anxious or meets some stressful situation in his or her life. But if this situation prevails for a longer duration, it may make a person to feel continu ously anxiety. This also disturbs their everyday activities. This may be an indication of generalized anxiety disorder. Children, adolescents and adults experience anxiety in different ways. The symptoms of anxiety are prominently visible in some. The physiological and psychological responses in the individuals also gives an indication of presence of anxiety disorder. The frequency and intensity of anxiety may differ from one individual to another. A person can experience anxiety at any point of time in life. An anxious person always worries about the unknown risks. Anxiety is generally defined as diffuse, unclear, very unpleasant feeling of fear and worry (Irwin & Barbara, 2005). Begovic (2015) revealed that 17.3% are addicted to internet and there was a significant positive association of the internet addiction level with the severity of anxiety. Younes et al. (2016) investigated that the potential Internet Addiction was higher among males and the noteworthy correlations were found between potential Internet Addiction and anxiety. Ostovar et al. (2016) found that Internet addiction is a predictor of anxiety and addictive internet use is gender sensitive and risk of Internet addiction is more in males than in females. Mohammadkhani et al. (2017) found that there is no significant difference between occurrence of Internet addiction in male and female of high school students and there is a significant positive relationship between internet addiction and signs of mental disorders. Gupta et al. (2018) examined that 25.3% students were found to be internet addicted. There was no association between age and sex groups of the study participants and internet addiction and revealed strong positive association between anxiety and internet addiction. The usage of internet has penetrated deep in the urban areas. The internet has become a necessity for the students to do online studies and entertainment. The internet is surfed for watching educational videos, social media websites, online games, movies, songs, dances etc. The school children are in the stage of exploration, they like to explore internet for various reasons. Some even watch porn websites and visit gambling websites out of inquisitiveness. It is very challenging for the students to remain focused in the studies. It is observed that some students get carried away by the online games, social media, porn sites and start spending more time on entertainment rather than focusing on academics. These young adolescents studying in higher secondary school often get disturbed due to over indulgence in the online activities. In the current Indian education system, the students at higher secondary level choose different streams of their choices to study specific subjects for making their career. The science stream students need to appear for entrance exam to make a bright future in medical sciences and engineering. The students of commerce, humanities and science have to achieve the higher grades for

their admissions in the reputed colleges. Parents invest a huge amount in the coaching classes for cracking the entrance exams. Generally, a student spends more than six hours for studying in the school, come back home and then go for their coaching classes. They have to fulfill the hopes of their parents and chase their own dreams. Some students prefer to spend time on internet for entertainment activities to reduce the pressure of school, parents and coaching classes. The present study has made an attempt to know the extent of internet addiction among the higher secondary level school students and the anxiety of higher secondary level school students having different levels of internet addiction in the Bhopal city.

OBJECTIVES

The objectives of the study are to know the extent of internet addiction among higher secondary level school students and to know the anxiety of higher secondary level school students having different levels of internet addiction. In order to study the first objective, the research question was framed as, what is the extent of internet addiction among higher secondary level school students? In order to study the second objective, the hypothesis was framed as, there is no significant difference in the anxiety of higher secondary level school students having different levels of internet addiction.

RESEARCH METHODOLOGY

The descriptive research method was used to conduct the research in the Bhopal city. The random stratified sampling was used to collect data from different CBSE schools. The information was collected from 600 students of higher secondary level. These students were from the streams of commerce, humanities and science. There were 300 girls and 300 boys . The permission was obtained from the school management for conducting the study. The students using the internet for more than three years for non- academic purpose were included in the study.

RESEARCH TOOLS

Internet Addiction Scale

To collect the information related to internet addiction, the researcher developed the Internet addiction scale. It has 20 items and aims to check the students on the extent of internet addition that they possess. The scale is in the form of a rating scale with does not apply, rarely, occasionally, frequently, often and always as the options and 0,1,2,3,4 & 5 as the ratings, respectively. The reliability index of the test was calculated by using the Spearman – Brown Prophesy formula. Split half method was used. Even-odd split method was done to make two halves of the items in Internet Addiction Scale. The reliability coefficient was found to be .81 which is sufficiently large to assume that the present Internet Addiction Scale is highly reliable instrument for measuring the internet addiction of higher secondary level school students.

General Anxiety Scale

The information regarding anxiety was collected by using the General Anxiety Scale developed by Dr. Anil Kumar. It is self-administered tool. The scale consists of 45 items which has been developed for use in Indian culture and conditions. The scale is helpful to locate the anxiety level of children up to an age of 17 or 18 years. The scale also categorizes the anxiety level of children into five categories such as very low, low, average, high and very high. The 45 items in the scale are related to varied life situations. These items contain an element of anticipation of dangerous and painful consequences. The coefficient of reliability for this scale as per Split-Half Method was .79 and as per Kudur-Richardson formula 20 was .81.

RESULTS AND DISCUSSION

The data collected was analysed and interpreted for all the two objectives of the research.

Internet Addiction among Higher Secondary Level School Students

The first objective of the study was ‘to know the extent of internet addiction among higher secondary level school students’ for which the research question prepared was ‘What is the extent of internet addiction among higher secondary level school students?’. The level wise internet addiction of the higher secondary level school students is presented in table 1.

Table 1. Internet Addiction of the Higher Secondary Level School Students

Level of Internet Addiction	Percentage %
Normal	10%
Mild	56%
Moderate	33%
Severe	1%

From table 1 it can be observed that the among the higher secondary level school students 10% had normal level of internet addiction, 56% had mild level of internet addiction, 33% had moderate level of internet addiction and just 1% had severe level of internet addiction. From above it can be inferred that very few students had severe level of internet addiction. The low percentage of severity of addiction is a good sign as it indicates that these students have appropriate control over the usage of internet. The results of researches conducted in this area vary from each other. Goel et al. (2013) conducted a study in Mumbai amongst college students between the age group 16 to 18 years and identified 0.7% as internet addicts. On the contrary, Anwar (2014) conducted a study among the secondary school students in Lucknow found that 10% were severely addicted to internet. Similar to this result Yadav et al. (2013) found that 11.8% higher secondary school students in Ahmedabad had internet addiction and Ali et al. (2019) in his study conducted in Tezpur, Assam reported presence of 34 % severe internet addiction among higher secondary school students. Further, in research conducted on undergraduate medical students in Indore found that 9.5% were severely addicted (Malviya et al. 2014). It was found that 4.75 % of the undergraduate students of Purulia, West Bengal, are addicted towards internet (Mahanti et al. 2016). A similar study done by Kumar and Mondal (2018) found that 39.5% of the students of different colleges in Kolkata were severe users of Internet. Among studies conducted abroad, in Guangzhou, China 0.96% adolescents were classified as severe internet addicts (Xina et al.,2018). In another study conducted by Wanajack (2011) it was found that 3.7% of Thai secondary school students in Chiang Mai, Thailand, were addicted users. Karapetsas (2012) found that 22% of students between age group 13 -15 years in the urban areas of Volos, Greece were addicts.

Anxiety of Higher Secondary Level School Students having different Levels of Internet Addiction

The second objective of the study was 'to know the anxiety of higher secondary level school students having different levels of internet addiction' for which the hypothesis prepared was 'there is no significant difference in the anxiety of higher secondary level school students having different levels of internet addiction.' In order to find the effect of internet addiction on anxiety, the mean anxiety scores of students belonging to four levels of internet addiction (normal, mild, moderate and severe) were compared with the help of one-way ANOVA. The results are presented in Table 2.

Table 2. Anxiety of Higher Secondary Level School Students having different levels of Internet Addiction

	SS	**df**	**MSS**	**F-Value**
Among	2204.724	3	734.908	11.273**
Within	38853.269	596	65.190	
Total	41057.993	599		

** Significant at 0.01 level

Table 2 indicates that the F-value for anxiety of higher secondary level school students is 11.273, which is significant at 0.01 level with df equal to 3/596. The F-value indicates that there is a significant difference in anxiety of higher secondary level school students having normal, mild, moderate and severe levels of internet addiction. Therefore, the hypothesis, namely, "there is no significant difference in the anxiety of higher secondary level school students having different levels of internet addiction", is rejected. Thus, it can be inferred that the anxiety of higher secondary level school students is dependent upon their level of internet addiction. Since there is found to be significant difference in the mean anxiety scores of students having different levels of internet addiction, there is need to find the difference between the various groups. This is shown in Table 3.

Table 3. Significance of difference of Means between Level of Internet Addiction in respect of Anxiety

Category 1	Category 2	df	Mean difference	't' value	Significances
Normal (20.11)	Mild (20.84)	395	0.726	0.641	p>0.05
Normal	Moderate (24.34)	259	4.229	3.630	p<0.01
Normal	Severe (32.50)	64	12.387	2.911	p<0.01
Moderate	Mild	532	3.503	4.860	p<0.01
Moderate	Severe	337	11.661	2.854	p<0.01
Mild	Severe	201	8.158	2.062	p<0.05

Table 3 indicates that there is a significant difference in the mean scores of anxiety of higher secondary level school students having normal, mild, moderate and severe levels of internet addiction. The mean anxiety scores of students having normal levels of internet addiction (M=20.11) is better than the students having mild (M=20.84) level of internet addiction but the difference is not significant at 0.05 level of significance. The mean scores of anxiety of students having normal level of internet addiction is significantly better than that the students having moderate (M=24.34) and severe (M=32.50) levels of internet addiction at 0.01 level of significance. Similarly, the mean anxiety scores of students having moderate levels of internet addiction is significantly better than the students having mild and severe levels of internet addiction at 0.01 level of significance. Further, the mean anxiety scores of students having mild levels of internet addiction is significantly better than the students having severe levels of internet addiction at 0.05 level of significance. Hence it can be concluded that the lower the level of internet addiction the lower will be the anxiety of the higher secondary level school students. Saikia et al. (2019) found that there is an association between the internet addiction and anxiety. Students with excessive internet use had high score on anxiety (Goel et al., 2013). Individuals having high usage showed depression and anxiety (Kumar & Mondal 2018).

CONCLUSION

The present research has highlighted the extent of internet addiction among the higher secondary level school students in the Bhopal city. It is a matter of growing concern as 33 % had moderate level of internet addiction and 1%had severe level of internet addiction. It was also found that there is a significant difference in the mean anxiety scores of students having different levels of internet addiction therefore the lower the level of internet addiction the lower will be the anxiety of the higher secondary level school students. The mean score of anxiety of higher secondary level school boys is 19.95 which is significantly lower than that of higher secondary level school girls whose mean anxiety score is 24.06. It may, therefore be concluded that girls are found to have significantly higher anxiety than boys.

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DEVELOPMENT OF THE MOTOR FUNCTIONS OF CHILDREN WITHOUT VISUAL IMPAIRMENT AND VISUALLY IMPAIRED CHILDREN

Original scientific paper

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ABSTRACT

The aim of this research was to examine the development of motor functions in children with visual impairment compared to children without visual impairment. The research included a sample of 70 respondents; 35 with impaired vision and 35 with no visual impairment. The research was conducted in Sarajevo at the Center for Blind and Visually Impaired Children and Youth "Nedzarici", and in Tuzla at the Elementary School "Centar". The results of the research have shown that respondents with visual impairment have less developed motor functions compared to respondents without visual impairment. The variables on which the respondents with visual impairment achieved the worst results, which refer to the quality of drawing and the speed of drawing, were especially singled out.

Keywords*: motor functions, visually impaired children, children without visual impairment*

INTRODUCTION

The organization of motor skills is the way in which the child's abilities and its behavior as a whole are manifested. Through motor skills, we perceive those qualities of a child that indicate its personality (Povse-Ivkic and Govedarica, 2000). Data from the literature indicate that interaction with family members (especially with the mother) and with other children has a great influence on the mental and motor development of children. (Poresky and Henderson, 1990). An insufficiently stimulating environment, in terms of inadequacy of space, means of work and work methods, and an unstimulating family environment affect the motor development of healthy preschool children (de Barros et al., 2003). Among numerous postnatal factors, the biggest influence on children's motor development is nutrition, socio-economic factors, stimulation from the environment, the relationship between parents and their participation in children's daily activities, and the cultural status of the family (Bacharach and Baumeister, 1998).Sensor-motor integration plays a very important role in motor learning. A minimum level of stimulation is needed to indicate to the child its overall potential for exploring the environment and thus stimulating its motor, structural, cognitive and emotional abilities (Bly, 1996). Children born with impaired vision bear the consequences, which are manifested in various forms of their development. Due to the impossibility of imitation and the lack of environmental incentives for movement, these children in most cases remain motor passive (Cvetkovic, 1989). Due to the impossibility of learning movements by imitation, as well as due to the inadequate influence of the environment, the blind child becomes disinterested in the objects around it (Eskirovic et al., 2005). Motor visual imitation plays a role in learning to walk, expressive speech movements, various games

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and various activities of everyday life. In a blind child, there is no visible imitation, so in this respect its motor skills are significantly poorer. In the motor development of a blind child, the role of visual imitation is taken over by tactile-kinesthetic imitation, with which the child learns to perform certain actions correctly through passive movements (Radzo Alibegovic, 2013). The main goal of this work was to determine the differences in motor functions between respondents with visual impairment and respondents without visual impairment.

METHODOLOGY

In this research, a sample size of 70 respondents aged between 7 and 15 years was included. 35 respondents were selected from the population of students without visual impairment and 35 visually impaired students from the Center for Blind and Visually Impaired Children and Youth in "Nedzarici" were selected.

Variables for testing motor functions

1. motor speed and dexterity
2. movements based on kinesthesia
3. copying the position of an object in space according to the given model
4. knowledge of the final level of experience of bodily wholeness at the level of execution of crossed motor commands
5. alternating alternative activities within the melokineticapraxia based on the evaluation of dynamic organization
6. presence/absence of motor perseverations
7. oral motor skills
8. quality and speed of drawing
9. coordination of movements according to the verbal command

METHODS

The research was conducted in Sarajevo at the Center for Blind and Visually Impaired Children and Youth "Nedzarici" and in Tuzla at the Elementary School "Centar": All respondents were examined individually in a separate room and in a pleasant environment.

Measuring instruments

One of the more complex scales ("C1") within the LNNB-C battery was used to assess motor functions (Golden, 1987). According to the instructions for use of the LNNB-C Battery, it is intended that each of the answers to individual tasks be scored in the following way: grade 0 indicates a normally developed function; grade 1 indicates marginally developed function; grade 2 indicates a pathologically developed function.

Data processing methods

After the research, the obtained data was processed with the computer program for statistics SPSS 16.0 for the Microsoft Windows operating system. Univariate and multivariate statistical methods were used in the statistical data processing, in accordance with the defined research objectives. Basic statistical parameters were calculated: minimum and maximum results, arithmetic mean and standard deviation. The distribution of respondents according to the test results is presented in frequencies. To determine the significance of the differences, a t-test, univariate analysis of variance (ANOVA), and multivariate analysis of variance (MANOVA) were used. Discrimination analysis was used to determine the factor of differences between the examined groups.

RESEARCH RESULTS

Table 1 shows the results of respondents with visual impairment on motor skills variables. On the motor speed and dexterity variable (items 1-3), the average achievement was 1.34 and the standard deviation was 1.71. For the kinesthesia-based movements (items 4-7) variable, the arithmetic mean was 0.23 with a standard deviation of 0.94. For the copying the position according to the given model in space (items 8-10) variable, the arithmetic mean was 0.57 and the standard deviation was 0.95. For the knowledge of the final level of experiencing bodily wholeness (items 11-14)variable, the average achievement was 1.94 and the standard deviation was 2.86. For the variable of alternating alternative activity within the melokinetic apraxia based on the evaluation of dynamic organization (items 15-17), the arithmetic mean was 2.23 and the standard deviation was 2.22. For the presence/absence of motoric perseverations (item 18) variable, the arithmetic mean was 0.86 and the standard deviation was 1.00. For the oral motor variable (items 19 and 20), the arithmetic mean was 0.17 and the standard deviation was 0.75. For the drawing quality (items 23, 25, 27, 29, 31) variable, the arithmetic mean was 7.46 and the standard deviation was 3.87. For the variable drawing speed (items 22, 24, 26, 28, 30 and 32), the arithmetic mean was 4.40 with a standard deviation of 4.69. 0.51 with a standard deviation of 0.89. The arithmetic mean, which points out the development of motor functions as a whole, is 19.71 with a standard deviation of 13.20.

Table 1. Results of respondents with visual impairment on variables of motor skills

Variable	N	min	max	$\overline{X}$	SD
motor speed and dexterity	35	0	6	1.34	1.71
movements based on kinesthesia	35	0	4	0.23	0.94
copying the position according to the given model in space	35	0	3	0.57	0.95
knowledge of the final level of experiencing bodily wholeness	35	0	8	1.94	2.86
alternating alternative activities	35	0	6	2.23	2.22
presence/absence of motor perseverations	35	0	2	0.86	1.00
oral motor skills	35	0	4	0.17	0.75
drawing quality	35	0	12	7.46	3.87
drawing speed	35	0	12	4.40	4.69
coordinating movements according to a verbal command	35	0	3	0.51	0.89
motor skills in total	35	1	45	19.71	13.20

As can be seen from the above, different areas contain a different number of items and the ranges of the scales are not the same. For this reason, the scores were transposed to a common scale with a range of 0 to 24 points. This way, a ranking list of the development of motor functions was obtained. The obtained results are shown in table 2. Considering the development of respondents with visual impairment, we can conclude that there are 6 groups of motor functions. The first group consists of movements based on kinesthesia and oral motor skills. The second group consists of copying positions and coordinating movements according to a verbal order. The third group consists of motor speed and dexterity and knowledge of the final level of experiencing bodily wholeness. The fourth group consists of drawing speed and alternating alternative activities. The presence/ absence of motor perseverations constitutes the fifth group. The quality of drawing is in the sixth group and it is the least developed motor function.

Table 2. Ranking list of the development of motor functions in respondents with visual impairment

Rank	Motor functions	$\overline{X}$
1.	movements based on kinesthesia	0.69
2.	oral motor skills	1.03
3.	copying positions	2.29
4.	coordinating movements according to a verbal command	2.66
5.	motor speed and dexterity	5.37
6.	knowledge of the final level of physical integrity	5.83
7.	drawing speed	8.80
8.	alternating alternative activities	8.91
9.	presence/absence of motor perseverations	10.29
10.	drawing quality	14.91

Table 3 shows the average achievements of respondents with no visual impairment on motor skills variables. For the motor speed and dexterity variable, an arithmetic mean of 0.71 points with a standard deviation of 1.32 was achieved. For the variable movements based on kinesthesia, the average score was 0.11 and the standard deviation was 0.68. For the variable position copying, the average score was 0.66 and the standard deviation was 1.16. For the variable knowledge of the final level of physical integrity, the arithmetic mean was 3.06, with a standard deviation of 1.98. For the alternating alternative activity variable, the arithmetic mean was 1.23 and the standard deviation was 1.31. For the variable presence/absence of motor perseverations, the arithmetic mean was 0.57 and the standard deviation was 0.92. For the oral motor skills variable, the arithmetic mean was 0. For the drawing quality variable, the arithmetic mean was 2.74 with a standard deviation of 2.34. For the drawing speed variable, the arithmetic mean was 1, with a standard deviation of 1.88. For the variable matching movements according to the verbal command, the arithmetic mean was 0.29, with a standard deviation of 0.52. For motor skills as a whole, the arithmetic mean was 10.37 and the standard deviation was 5.5.

Table 3. The results of respondents without impaired vision on motor skills variables

Variable	N	min	max	$\overline{X}$	SD
motor speed and dexterity	35	0	5	0.71	1.32
movements based on kinesthesia	35	0	4	0.11	0.68
position copying	35	0	4	0.66	1.16
knowledge of the final level of physical integrity	35	0	7	3.06	1.98
alternating alternative activities	35	0	5	1.23	1.31
Presence/absence of mot. pres.	35	0	2	0.57	0.92
oral motor skills	35	0	0	0.00	0.00
drawing quality	35	0	8	2.74	2.34
drawing speed	35	0	8	1.00	1.88
coordinating movements according to a verbal command	35	0	2	0.29	0.52
motor skills in total	35	3	27	10.37	5.50

Table 4 shows the differences in the motor functions of children with no visual impairment and visually impaired children. On the oral motor skills variable, it was not possible to determine the significance of differences in arithmetic means because there is no variance. On the variables of alternating alternative activity, quality of drawing, speed of drawing and motor skills, a statistically significant statistical difference between the arithmetic means was achieved ($p<0.05$). Respondents with no visual impairment on these variables have better developed motor functions than respondents with visual impairment. There are no statistically significant differences in the variables motor speed and dexterity, movements based on kinesthesia, copying of positions, knowledge of the final level of integrity, presence/absence of motor perseverations, coordination of movements according to verbal orders. A significant correlation at the 0.01 level was achieved for the variables drawing quality and drawing speed. There is a statistically significant mean correlation between the development of motor functions as a whole ($r=-0.39$). There were no statistically significant correlations on the other variables.

Table 4. Differences in the motor functions between respondents without visual impairment and respondents with visual impairment

Variable	Without visual impairment (N=35)		With visual impairment (N=35)		t	p_{sig}	r_s	p_{sig}
	$\overline{X}$	SD	$\overline{X}$	SD				
motor speed and dexterity	0.71	1.32	1.34	1.71	-1.72	0.09	-0.23	0.06
movements based on kinesthesia	0.11	0.68	0.23	0.94	-0.58	0.56	-0.07	0.56
position copying	0.66	1.16	0.57	0.95	0.34	0.74	-0.01	0.97
knowledge of the final level of physical integrity	3.06	1.98	1.94	2.86	1.89	0.06	0.23	0.06
alternating alternative activities	1.23	1.31	2.23	2.22	-2.29	**0.03**	-0.18	0.13
presence/absence of mot. pres.	0.57	0.92	0.86	1.00	-1.24	0.22	-0.15	0.22
oral motor skills	0.00	0.00	0.17	0.75	no variance		-0.17	0.16
drawing quality	2.74	2.34	7.46	3.87	-6.17	**0.00**	-0.60	**0.00****
drawing speed	1.00	1.88	4.40	4.69	-3.99	**0.00**	-0.34	**0.00****
coordinating movements according to a verbal command	0.29	0.52	0.51	0.89	-1.32	0.19	-0.10	0.44
motor skills in total	10.37	5.50	19.71	13.20	-3.87	**0.00**	-0.39	**0.00****

*correlation significant at the significance level 0,05

** correlation significant at the significance level 0,01

It is not possible to determine the significance of the differences of the arithmetic means because there is no variance for the variables:

- Oral motor skills ($\lambda^2=2,06$; $p=0,36$),

It can be seen that respondents without visual impairment achieved better average results on motor functions than respondents with visual impairment. Respondents without visual impairment have more harmoniously developed motor functions than respondents with visual impairment. In order to examine the differences between respondents with and without visual impairment in the space of 10 variables that determine motor abilities, a discriminant analysis was applied (table 5). Multivariate analysis of variance revealed that Wilks' lambda is statistically significant for the first discrimination function ($p<0.05$). A univariate analysis of variance (ANOVA) was performed for individual variables of motor abilities, and the results indicate that there are statistically significant differences between respondents with and without visual impairment on the following variables: "drawing quality", "drawing speed" and "alternating alternative activities" where respondents without visual impairment achieved statistically significantly better results. The variable "drawing quality" (c=1.067; r=0.630) contributes the most to the discrimination of groups of respond ents. The square of the canonical correlation indicates that the variables of motor skills can, with approximately 59% certainty, classify the respondents into two categories of the criterion variable related to the presence/absence of visual impairment. Therefore, in addition to visual impairment, there are 41% of other factors that could affect the motor skills of the respondents, but which were beyond the scope of the variables of this research.

Table 5. Analysis of variance and discriminant analysis of motor ability variables between respondents with and without visual impairment

Funktion	**Canonical correlation**	**Wilks' λ**	**χ^2**	**df**	**p**
1	0.765	0.415	55.345	10	**0.000**
			Funktion 1		**ANOVA**
			c	**r**	**F**	**p**
Drawing quality			1.067	0.630	38.033	**0.000**
Drawing speed			0.447	0.407	15.878	**0.000**
Alternating alternative activities			-0.123	0.234	5.258	**0.025**
Knowledge of the final level of physical integrity			-0.732	-0.194	3.588	0.062
Motor speed and dexterity			-0.069	0.176	2.957	0.090
Oral motor skills			0.133	0.139	1.843	0.179
Coordination of movements according to verbal command			0.478	0.135	1.732	0.193
Presence/absence of motor perseverations			-0.446	0.127	1.545	0.218
Movements based on kinesthesia			-0.048	0.060	0.340	0.562
Position copying			-0.615	-0.035	0.114	0.736

DISCUSSION

Based on the results obtained on the motor skills of visually impaired respondents, it can be observed that the best developed motor functions related to movements based on kinesthesia are oral motor skills, and the least developed motor function is the quality of drawing. Motor functions copying the position of objects according to a given model, coordinating movements according to a verbal command, motor speed and dexterity, and knowledge of the final level of body integrity at the level of execution of crossed motor commands are moderately developed motor functions. The results of the assessment of the development of motor functions in respondents without visual impairment and respondents with visual impairment indicate that motor functions are generally better developed in respondents without visual impairment. Differences in arithmetic means are significant at the 0.01 level, as is the correlation coefficient. Also, for all other variables that examine motor skills, respondents without visual impairment achieved better results, and a statistically significant difference in arithmetic means as well as correlation was achieved for the variables quality and speed of drawing. Respondents without visual impairment achieved better results for most motor skills variables skills compared to respondents with visual impairment. The largest difference in mean values was for the variable "drawing quality" (4.714), and the smallest for the variable "position copying" (0.086). For the variables "position copying" and "knowledge of the final level of physical integrity", better results were achieved by the visually impaired respondents, but the differences were not statistically significant. Pavlovic (1987) applied the Ozeretzki motor test to a sample of 80 school children, chronologically aged 6-11 years (40 children with impaired vision and 40 children with no visual impairment). The author concluded that visually impaired children showed a significantly lower motor ability compared to children without visual impairment in the overall motor quotient (general motor ability) and on all dimensions of psychomotor space. Levitzon-Korach et al. (2000) examined the characteristics of motor development in a sample of 40 blind children in Israel aged up to 5 years, compared to children without visual impairment. A measuring instrument called "Bayley Developmental Scale" was used for a certain chronological age. The following motor skills were tested: rolling, crawling, standing independently, sitting, walking with the help of others, walking independently, climbing stairs with someone's help, standing on one leg, hopping with both legs, and walking up stairs without anyone's help. The examination led to the conclusion that blind children show statistically significant differences in all 10 examined motor skills (abilities). In 2009, Radzo Alibegovic and Jablan conducted research whose goal was to examine the difference in motor skills between children without impaired vision and children with impaired vision. 58 children between the ages of 6 and 15 were tested, of which 29 were visually impaired and 29 with no visual impairment. Psychomotor abilities were assessed using the Ozeretzki test. Using the t-test, it was determined that there are significant differences in motor skills between children with impaired vision and children without impaired vision, that is, that children without visual impairment achieved better results in motor skills than children with impaired vision. Webber et al. (2008) conducted research on the impact of amblyopia on fine motor skills in visually impaired children. 82 children aged 8-16 years were examined with the Bruininks-Oseretsky motor test. They came to the conclusion that fine motor skills were improved in children with visual impairment compared to the control group without visual impairment. The biggest differences were achieved on tasks requiring manual skills related to speed and precision. Troster, Hecker, and Brambing (1993) compared motor development in blind infants and infants without visual impairment. The study included 24 blind babies, but 10 of them were born prematurely so they were not taken into account in the study. The obtained results showed that blind children lag behind in locomotor activities such as crawling, walking while holding on with their hands.

CONCLUSION

Examining the differences in the development of motor functions between respondents without visual impairment and respondents with visual impairment, it was determined that motor functions were generally better developed in respondents with no visual impairment. Differences in arithmetic means are significant at the 0.01 level, as is the correlation coefficient. Also, on all other variables that examine motor skills, respondents without visual impairment achieved better results, but these differences are not statistically significant. Statistically significant difference of arithmetic means as well as correlation was achieved for the quality and speed of drawing variables.

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STUDENTS' VIEWS ON THE APPLICATION OF INNOVATIVE METHODS IN TEACHING

Original scientific paper

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ABSTRACT

The skills and attitudes acquired in the classes allow the student to get to know and understand the world around him better, to learn more easily in the natural and social environment and to make decisions about personal prosperity. This research includes 300 students, emphasizes the issue of the quality of education in secondary schools, with a focus on the acquisition of knowledge through innovative methods, as well as the issue of the quality of students' acquired knowledge, the impact on student achievements. Interactions between students and lecturers. Quality knowledge belongs to the level of recognition and reproduction. However, the test results so far show serious deficiencies and failures in teaching in the Republic of Kosovo, indicating the necessity of applying modern techniques and methods of the teaching process in order to improve the quality of teaching, which, among other things, requires personal creativity and engagement of teachers. In order for the aforementioned methods and techniques of curriculum implementation to be applicable, teachers need to be additionally educated and provided with appropriate contemporary literature in these areas. The paper presents the results of the statistical software package SPSS version 25, about students' attitudes about developing the ability to use modern methods and techniques in teaching based on age, gender in relation to the program of attendance. Researchers suggest the use of innovative methods that have proven to be useful in the teaching and learning process.

***Keywords**: Education, knowledge, teaching, students, learning.*

INTRODUCTION

The intensive development of science, technology and technique requires that every teacher acquire in-depth knowledge of his discipline, and this requires a multidisciplinary methodical approach in teaching. The work of teachers in Kosovo is complex, dynamic and challenging due to changes in teacher qualifications, working conditions in schools that are not modernized and do not provide the opportunity to work with students, due to changes in the reform of the curriculum and traditional aspects of teachers. Teachers carry a number of responsibilities on their shoulders, which are only added to (Saciri, 2012).

The reform of the curriculum in Kosovo, i.e. the new Curriculum Framework for Pre-University Education in Kosovo, is characterized by a major change, from an approach based on content and learning objectives, to an approach based on competences and learning outcomes, an approach based on subjects, as well as in an integrated approach to curricular areas. The new curriculum encourages teachers to think about the results-based approach (Blerim et al., 2014). The teacher aims to form certain knowledge, skills and abilities in students.

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The goal of the school is to develop the personality and individuality of each child. Today, the increasing presence of innovations, both technological and pedagogical in nature, is evident. These units enable students to learn and demonstrate their abilities and to form positive attitudes towards modern technical and technological creativity (Namestovski, 2013).). Education should be open, flexible and able to follow scientific, technological, economic and social changes (Avramovic, 2004). The quality of education in Kosovo is implemented through the Strategic Plan, where in 2015, Kosovo for the first time developed a quality assurance strategy for pre-university education 2016-2021. The three main pillars of this document are: 1. Reforming the teaching process for modern teaching. 2. Building a teaching career throughout life. 3. Strengthening the practical aspects of the curriculum. The strategic plan of education in Kosovo 2017 - 2021, which is a continuation of SPOK for the period 2011-2016, in the document "Strategic framework for the development of teachers in Kosovo, approved by MEST" in April 2017, as well as in the document Framework for ensuring the quality of work in schools. Quality is the most significant phenomenon of our time, which is identified with the new philosophy of living (Antonijevic, 2006). Knowledge and abilities can be defined as a dynamic concept that changes under the influence of all the changes in today's society. Education is important for intellectual development. The Socratic method is still used in teaching today (Bolcevic, 2015; Zoric,2008), and its main advantage is that it is targeted and permanently understood, understood and remembered, and students are encouraged to actively and independently solve problems by connecting new content. With prior knowledge, they increase reasoning ability and self-awareness and allow the teacher to gain insight into students' understanding and knowledge. Teaching contents represent the concept of teaching quality, which is closely related to concepts such as: educational standards, reliability in teaching, adaptability of teaching to the age of students, as well as their prior knowledge. In addition to all the problems we face during teaching, we must make a quality correlation in teaching that will connect science into a unique educational system. Students' ways of learning are largely determined by the environment that affects the development and formation of their thinking and attitudes, as well as by their lifestyle (Janjusevic, 1956). The goal of this work is to point out the great importance of using innovative methods in teaching.

METHODICAL APPROACH IN THE STUDENT'S WORK

A school is worth as much as a teacher is worth. This is why progress in teacher education is the first part of any school reform. We can observe the function of the teacher from the aspect of traditional, classic and current school, that is, the school of the future, that is, the modern school. In a traditional school, the teacher was the mediator between the teaching content and the students. The modern school requires that the teacher constantly hangs out with the book, studies, upgrades, learns new things and permanently works on his professional development and education. The school should be new, unrepeatable, modern (Stevanovic, 1982). The modern approach to teaching is based on discovery learning strategies (Halasi, 2005). Students are no longer passive listeners, but active participants in the learning process. The teacher is now just a moderator who guides the student. The teaching method is a way of activating participants in the educational process. It should be understood that all students can learn through their own activity, and the task of the school is to create conditions for that activity (Prodanovic, Nickovic, 1988). Of course, the student must reach the appropriate solution through his own activity and be an inventor in the search for the truth (Vilotijevic, 2016).

METHODOLOGY

Subject of research

The basic research question addressed in this work refers to the positive impact of applied innovative methods in teaching. The goal of the research is to form a picture of the application of innovative methods in the teaching process, as well as the attitudes and opinions of students about the same. The goal is to point out, based on the use of innovative methods in the education of high school students, the statistically significant possibility of raising the comprehensive level and quality of the educational process by using innovative methods in teaching. It is expected that students will express their desire to use existing modern teaching aids to a greater extent in class.

Research tasks:

Determine whether students use innovative methods in teaching. To determine whether innovative methods contributed to easier mastering of teaching material. Reconsider their interest in continuing with this form of teaching and processing new material through subjects.

Research methods, techniques and instruments:

In the research process, an anonymous survey method was used, that is, a questionnaire instrument. The questionnaire was designed to contain 13 questions. Questions are asked in written form, answers are given in written form. Answers are offered for each question, and students should mark one of the offered answers. The survey was used only for statistical purposes for the purposes of this paper. Hypothesis The research is based on a general hypothesis which reads: Students' attitudes about the application of innovative methods in teaching.

Sample and research site

A purposive sample was taken for the purposes of the research. The examined group consists of 300 students of the first, second and third grades of the secondary school "Đon Buzuki" in Prizren, where classes are conducted trilingually in Albanian, Bosnian and Turkish. On the basis of the research, positive results were obtained that speak of the justification of the application of innovative methods in teaching. Because of all this, it is necessary for teachers to get involved in modern trends and apply innovative forms of work in class, and not wait for changes to come by themselves.

RESEARCH

Questionnaire:

1. Students understand the importance of using scientific data and knowledge.
2. Students develop the ability to cooperate.
3. Students develop communication skills and tolerance.
4. Students develop team work and taking responsibility.
5. Students develop the ability to work independently.
6. Students develop self-confidence and creativity.
7. Students develop curiosity in class.
8. Students develop a positive interest in science.
9. Pupils develop commitment in class.
10. Students develop efficiency in teaching.
11. Students develop diligence.
12. Students develop a responsible attitude towards the use of material resources in teaching.
13. Students develop the ability to be responsible and actively participate in solving problems related to teaching Students develop precision and the ability to reason and solve given problems.

Table 1. Students' attitudes about developing the ability to use modern methods and techniques in teaching

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Students understand the importance of using scientific data and knowledge	300	2.00	5.00	4.0333	.78078
Students develop the ability to cooperate	300	3.00	5.00	4.2533	.71594
Students develop communication skills and tolerance	300	3.00	5.00	4.3933	.72257
Students develop team work and taking responsibility	300	2.00	5.00	4.1867	.84652
Students develop the ability to work independently	300	1.00	5.00	3.9600	1.12852
Students develop self-confidence and creativity	300	1.00	5.00	4.0267	.96896
Students develop curiosity in class	300	1.00	5.00	3.8933	1.03071
Students develop a positive interest in science	300	2.00	5.00	3.8400	.92743
Pupils develop commitment in class	300	1.00	5.00	3.8533	.92240
Students develop efficiency in teaching	300	2.00	5.00	3.8200	.89795
Students develop diligence	300	2.00	5.00	3.9867	.88981
Students develop a positive attitude towards innovative problem solving	300	2.00	5.00	4.0467	.82199
Students develop a responsible attitude towards the use of material resources in teaching	300	1.00	5.00	3.9067	1.01232
Students develop the ability to be responsible and actively participate in solving problems related to teaching	300	1.00	5.00	3.9333	1.03409
Students develop precision and the ability to reason and solve given problems	300	1.00	5.00	3.9667	1.07076
Mean	300	2.67	5.00	4.0067	.51575

From the presented results, descriptive statistics show that there is no statistically significant difference between the answers of the students. The difference that can be observed is with the question "Students develop communicativeness and tolerance" and the question "Students develop efficiency in teaching" (Mean 4.3933 and 3.8200).

Table 2. Attitudes of students in relation to gender

	Gender	N	Mean	Std. Deviation	df	t	p
Average	Male	148	4.0856	.48434	148	1.865	.064
	Female	152	3.9298	.53664			

In Table 2, the T-test p=.064 (p > 0.05) found that, in relation to gender, there is no statistically significant difference, in relation to the questions asked and the results obtained.

Table 3. Attitudes of students in relation to the student attendance program

	Program	N	Mean	Std. Deviation	df	t	p
Average	Naturale Science	152	3.9482	.57951	148	-	.160
	Social Science	148	4.0667	.43667		1.411	

In Table 3, the T-test p= .160 (p > 0.05) shows that there are no statistically significant differences in relation to the direction the students attend.

Table 4. Differences in student opinion within and between groups

Class	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.286	2	1.643	6.645	.002
Within Groups	36.347	147	.247		
Total	39.633	149			

Table 5. Attitudes of students in relation to the class they attend

Class	N	Mean	df		
				10 grade	11 grade
10 grade	82	3.7854	.56421		
11 grade	118	4.1537	.48301	.001	
12 grade	100	4.0147	.45362	.091	.444

From the presented results, by ANOVA (Boneferroni) test, it is evident that there is a statistically significant difference between the students' answers, depending on the class they attend, between the 10th and 11th grade students (Mean 3.7854-4.1537; df, 56421- ,48301, p 001).($p<0.05$). While there is no statistically significant difference in the assessment of their importance among 12th grade students.

Table 6. Differences in student opinion within and between groups

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.273	2	1.636	6.616	.002
Within Groups	36.361	147	.247		
Total	39.633	149			

Table 7. Attitudes of students in relation to age

Age	N	Mean	df		
				16 year old	17 year old
16 year old	82	3.7854	.56421		
17 year old	116	4.1540	.46862	.001	
18 year old	102	4.0170	.47137	.084	.460

From the results shown, ANOVA(Boneferroni), examination shows that there is a statistically significant difference between students' answers, depending on the age of the students, between students who are 16 years old and students who are 17 years old (Mean 3.7854- 4.1540; df, 56421-.46862, p 001)., ($p < 0.05$). While in the case of students over 18 years of age, there is no statistically significant difference in the assessment of their importance. Based on the analyzed data and the obtained results, we can conclude that the working hypothesis is fully confirmed, that is, there are certain different opinions regarding the attitudes of students in applying innovative methods in the teaching process.

CONCLUSION

The research in this paper showed that there is a great justification and need for the introduction of innovative methods in the teaching process in secondary schools, because this is what today's generations need for the successful adoption of teaching materials. Research has shown that there are certain different opinions regarding the attitudes of students in the application of innovative methods in the teaching process. Science and technology are progressing at a tremendous speed and this progress is visible. The school, teachers and students are in a significantly different environment than a few decades ago. In such conditions, the school cannot remain on the traditional way of working in which the teacher and the textbook are the only source of information and in class the teacher teaches and the student only passively listens. Therefore, by adopting high-quality knowledge of students, as well as by connecting teaching methods and techniques, school institutions will justify the purpose of their existence, which has been confirmed by research.

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VOCATIONAL TRAINING AND LABOUR MARKET IN THE REPUBLIC OF KOSOVO

Original scientific paper

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ABSTRACT

To analyse democratic and legal labour relations in the current conditions of economic and social development means, first and foremost, to highlight their essence and main features, as well as the development trends and future improvements of these relations.The year 2021, like 2020, has been characterized, among others, by the COVID-19 pandemic. This has produced various effects. As an effort to mitigate these effects, the Government of Kosovo has undertaken measures to support employment through the economic recovery package. Based on this context, the main and only purpose of the 1st Measure of economic recovery is the support of employment. Active employment measures have played a very important role in the integration of unemployed persons into the labour market. One of these measures with the largest number of beneficiaries is Vocational Training. Vocational training is a fundamental and very important process to get a job. In this sense, even the latest statistical data (2021) of the official authorities of Kosovo prove that the largest beneficiaries of active labour market measures are the persons who have undergone vocational training. The purpose of Vocational Training is to enable an increase or adoption of professional knowledge, namely to acquire additional knowledge, skills and abilities to perform efficient work, in order to increase the prospect of employment or retain their employment. Based on the international aspect, employment and the labour market are under the pressure of many factors, such as demographic, technological, economic and political ones; therefore, vocational training is considered as one of the most successful active labour market measures.

***Keywords**: employment, employment relationship, vocational training, mediated employment.*

INTRODUCTION

Active labour market measures reflect the great importance these measures have in support of unemployment. One of the main strategic objectives of the Public Employment Services in Kosovo is to increase employment, develop skills in accordance with the labour market demands and better labour market administration. This objective aims to enable increased employment in Kosovo by addressing the challenges of workforce skills and mismatches between demand and supply in the labour market, which will be made possible by strengthening the capacities of Public Employment Services, expanding the range of services and improving their quality. In the field of vocational training, the focus should be on improving the quality of programs and their better matching with the labour market. Vocational training means all activities aimed at providing knowledge, training and new experience for necessary training, efficient work within the occupation. The objective of vocational training is the institutional training provided to job seekers for a certain occupation, based

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on the increase or adoption of professional knowledge, skills and practical knowledge, with the aim of improving professional capacities to ensure and protect qualitative work, and facing with changes in technology and labour market conditions. Vocational training, as well as other active labour market measures, have played a very important role in the integration of unemployed persons into the labour market. Materials and work methods During this research, I have used various scientific and professional sources, including university texts, scientific papers and articles, analysis, statistical data, constitutional and legislative acts of domestic and international labour law. The research employed various scientific methods, which are typical for scientific research of social and humanitarian sciences.

DISCUSSION

Employment

The state, in the conditions of a market economy, appears as a regulator in function of a progressive social policy. This political function aims to mediate, as much as possible, the employment of people capable to work. However, this mission cannot be properly fulfilled, except in agreement with employers and professional organizations (Robaj, 2017: 48). The economic crisis and unemployment in the world constitute a serious concern in the employment policy of every democratic state. In this context, some solutions are required, such as in the form of reducing working hours, lowering the retirement age, reviewing immigration and emigration policies, modernizing the economy and seeking improved competition, investment policies in creating new jobs, etc., (Robaj, 2017: 49). In order to establish a legal employment relationship, a consensual contract is required in written form and signed by the employer and the employee (Law on Labour of Kosovo, 2010: Article 10). Definition "employment contract" in French: Contrat du travail (Pélissier, 1986: 321), in English: Labour contract, and the definition "employment contract" in French: Contrat démploi; in English: employment contract; contract of hire (Goldman, 1984: 43) are synonymous and there is no special difference in their content, which would be of theoretical importance (Tintic, 1969:168). In labour legislation, the definition of employment contract first appears in Belgian law (Humblet, Rigaux, 2004: 41), then also in French law in 1901, Dutch law in 1907, etc. The right to work, in the general sense, is defined only with the establishment of the employment relationship, as a safe and decent job (Constitution of Kosovo, Article: 23). In foreign legal doctrine, theories related to the legal nature of the employment relationship have emerged, such as: contracting theory (Kovacevic, 2011: 49-51; Bajic 1937: 9; Deakin, Morris, 2009: 63-64); the theory of loyalty (Supiot, 2007: 18); and institutional theory (Vannes, 2005: 16-21). However, it should be noted that the legal doctrine of labour recognizes, as a more accurate thesis, the theory of those authors who affirm that the individual labour contract is an autonomous contract, a contract of a special type (Çela, 2013: 25-30; Berenstein, Mahon, 2001: 53, 56-57; Weis, Schmidt, 2008: 87).

Content of the individual employment contract

As a rule, people have an employment contract whereby they are employed by providing their services within the framework of the employer's organization and orders, for a certain salary (Çela, 2013:171; Vannes, 2005 :16-21; Holbach, 1994: 25; Spasiq, 1950: 160; Kovacevic-Kustrimovic, Lazic, 2008: 244-245). In fact, according to jurisprudence, it is obvious that the capacity of the contracting parties is important in the individual employment contract, which means that the contract belongs to the group of personal contracts, namely intuitu personae (Brun, 1962: 1719; Pélisser, Supiot, Jeammaud, 2000: 52-53; Stojanović, 1981: 149; Rade, 1997: 78; Kulic, 2006:109; Jovanovic, 2003: 41). Based on the comparative law, the individual employment contract, as a rule, represents the consensual contract where the written form is legally provided, such as English (Wedderburn, 1987: 133-136), American (Player, 1992: 5), Canadian (Opie, 1996: 256), French (Rivero, Savatier, 1987: 462-464), German (Weiss, Schmidt, 2008: 87), Swedish (Edlund, Nyström, 1988: 60), Japanese (Hanami, 1985: 55-56), etc., labour laws. Thus, the European labour law also defines the employment contract as a consensual contract between the contracting parties (Blanpain, 2006: 237-239; Treu, 2007: 61; Scognamiglio, 1992:202; Gams, 1974:203; Dauti, 2004:64). So, the written form is necessary in the employment contract, because if the written form is missing, then the contract does not create legal consequences and the legal employment relationship is considered not to exist, but in fact the so-called factual work exists (Weis; Schmidt, 2008: 89; Humblet, Rigaux, 2004: 62; Amon, 2010: 238; Tintic, 1972: 674; Despotovic, 1978:37-38). However, in addition to the dependent work, jurisprudence also recognizes the independent

work, which is regulated by special legislation (lex specialis), subject to the scope of work, e.g., to practice the private activity in health sector (Law Private Practices in Health of 2004); to practice advocacy (Law on Advocacy of 2009 and 2013); to practice the private enforcement (Law on Enforcement Procedure of 2012), etc. All these activities are not considered employment relationship, even though the employee works and generates income from work. In fact, according to jurisprudence, independent work is considered self-employment, not a legal employment relationship.

Vocational training

Vocational education and training aim to provide knowledge and practical skills, for the efficient realization of activities within an occupation or a group of occupations, regulated by the Law on Vocational Education and Training, the Law on the Employment Agency of the Republic of Kosovo, the Law on Registration and Providing of the Services for Unemployed, Jobseekers and Employers[3], and the Regulation on Active Labour Market Measures[4]. Vocational training includes three components, namely: 1. Institutional training, which means the training provided by Vocational Training Centres (VTCs) for unemployed persons and job seekers for a certain occupation; 2. Combined training, which means cooperation with companies for the inclusion of the unemployed and jobseekers in vocational training, with the aim of providing the highest quality vocational training services, through training in partnership with businesses; 3. Combined training from accredited external providers, which means training provided by external providers and can only be provided for those occupations that are not provided by Vocational Training Centres. The training at the Vocational Training Centres (VTCs) is quite advanced and is based on the candidate's individual skills, with a training duration of 3-6 months. The trainings involve 30% theory and 70% practice, and after each developed module, the candidate undergoes a test, as well as the final test at the end of the training, and upon successful completion, the candidate receives a certificate on the acquired knowledge. Vocational Training, as an Active Labour Market Measure, is organized and provided by eight (8) Vocational Training Centres, operating under the Employment Agency administration[5]. Vocational Training, like previous years, also during 2021, represents one of the Active Measures with the largest number of beneficiaries. This measure participates in a proportional share with 45.3% or with 2,923 references in vocational trainings, and about 230 persons or 3.5% were referred in the combined training. So, a total of 3,153 job seekers were referred to vocational trainings (See Tab.1).

Table 1. Active Labour Market Measures

Types	2018	2019	2020	2021	%	Difference 2020
Vocational Training	5497	6603	3436	2923	45.3%	-14.9%
On-the-job training	493	420	1498	28	0.4%	-98.1%
In-Company training	197	322	396	228	3.5%	-42.4%
Public work	680	827	540	9	0.1%	-98.3%
Wage Subsidy	336	445	51	462	7.2%	805.9%
Self-employment	390	214	96	10	0.2%	-89.6%
Professional internship	1101	2705	3446	2788	43.2%	-19.1%
Total	8.694	11.536	9463	6448	100%	-31.9%

Vocational Training during 2021 has managed to achieve 3,153 referrals, reflecting a downward trend of 8.2% compared to the previous year[6]. This downward trend for 2021, like the previous year, is a result of the global pandemic and the closure of certain profiles of Vocational Training Centres. The Vocational Training Department for certain profiles has reflected a lack of

[1] Law on Vocational Education and Training, 2013.
[2] Law on the Employment Agency of the Republic of Kosovo, 2014.
[3] Law on Registration and Providing of the Services for Unemployed, Jobseekers and Employers, 2016.
[4] Regulation on Active Labour Market Measures, 2018.
[5] Employment Agency of the Republic of Kosovo, Annual Report, 2021.
[6] Employment Agency of the Republic of Kosovo, Annual Report, 2021.

trainers and in this respect many job seekers have not been able to attend the trainings. The number of job seekers referred to Vocational Training Centres is 3,153 persons for 2021, distributed in 7 Vocational Training Centres. However, this number has fluctuated over the years, thus, in 2019 there were 6,603 persons referred to vocational training, while in 2021 there were 3,153 job seekers referred to vocational training (see Fig.1).

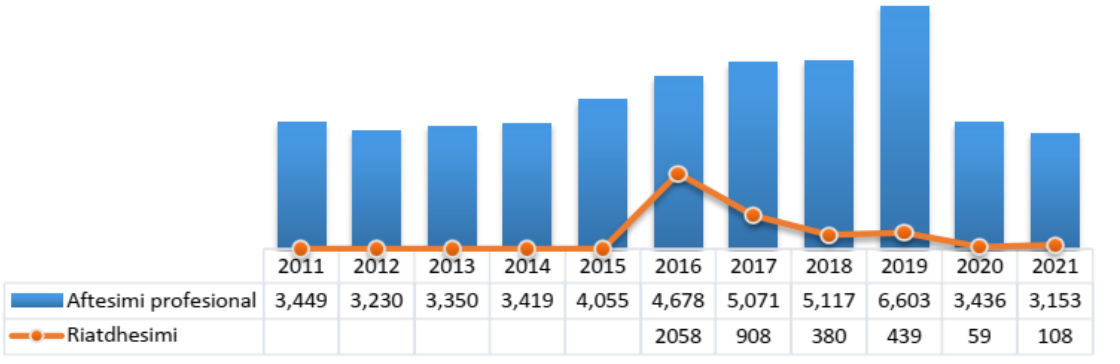


Figure 1: Trend of entry into Vocational Training, by years

The highest number of participants in Vocational Trainings is mainly among people with the secondary qualification level "Secondary school - Gymnasium" and "secondary vocational education" who together make up 67.8% of the participants in the training. This is followed by job seekers with primary school with 23.9%. The smallest number of participants is among people with Master's qualification level, who make up 0.2% of the total number. Mainly, the number of those referred to highly qualified vocational trainings comes as a result of new career guidance, the mismatch of supply and demand in the labour market. (See Tab. 2).

Table 2. Active Labour Market Measures

Vocational Trainings	Vocational training	%	TP	Certified	CP
Unqualified	-	-	-	-	-
Grades I –IX (Primary School)	753	23.9%	4.8%	588	78.1%
Secondary vocational education	828	26.3%	4.8%	605	73.1%
Secondary school - Gymnasium	1309	41.5%	24.8%	1061	81.1%
Bachelor	258	8.2%	4.4%	201	77.9%
Master	5	0.2%	0.9%	4	80.0%
Doctor of Science	-	-	-	-	-
Total	3153	100%	3.8%	2459	78.0%

The training rate in Vocational Trainings for the "Secondary school - Gymnasium" level is 24.8%, followed by the Secondary Vocational Education and Primary School qualification level with 4.8%. Other qualification levels, such as Masters' degree, have the lowest share, with a training rate at only 0.9%. (See Fig. 2).

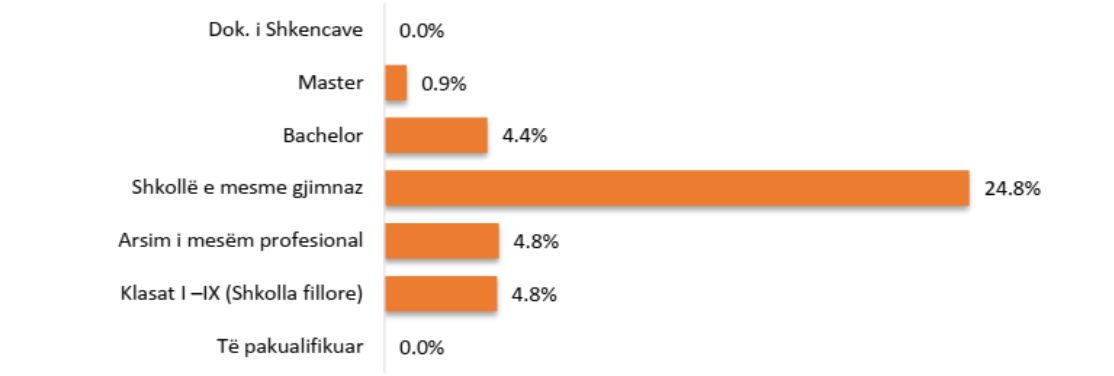


Figure 2: Training rate by qualifications

In relation to the age group, the data for 2021 show that the highest number of participants in Vocational Training was focused on persons in the age group of 25-39 years, who make up 41.5% of all trainees. Persons in the 15-24 age group also have a similar percentage to the first group with 40.85. While the percentage of other age groups participation is lower (see Tab. 3). As for the Certification Rate (CR), the highest percentage is achieved by older age groups, namely people of the 55+ age group with 86.7%.

Table 3. Vocational training by age groups

Age group	Vocational Training	%	TR	Certified	CR
15-24	1285	40.8%	9.4%	968	75.3%
25-39	1309	41.5%	3.7%	1055	80.6%
40-54	529	16.8%	2.3%	410	77.5%
55+	30	1.0%	0.3%	26	86.7%
Total	3153	100%	3.8%	2459	78.0%

Young people, despite being the main priority for Vocational Training during 2021, reflect the activation of 1,285 persons or 40.8%, or a training rate of 9.4%. While the number of certified persons is 968 or 75.3%.[7] In terms of gender, the referrals of jobseekers in Vocational Trainings for 12 months show that women are under-represented, where the percentage of women's participation is significantly lower than the participation of men (See Tab. 4).

Table 4. Vocational training by gender

Trainings	Vocational Training	%	TR	Certified	CR
Women	932	29.6%	2.4%	737	79.1%
Men	2.221	70.4%	5.1%	1,722	77.5%
Total	3.153	100%	3.8%	2.459	78.0%

Although women have a lower participation in vocational trainings, they have a slightly higher certification rate than men. Thus, the certification rate for women is 79.1% while for men is only 77.5%. The dominant region of referrals in vocational trainings is that of Prizren, followed by the Region of Peja and Ferizaj. These together contain over 67% of all trainings in Kosovo.[8]

[7]Employment Agency of the Republic of Kosovo, Annual Report, 2021.
[8]*Ibid.*

Employment mediation

One of the main strategic objectives of the Government of Kosovo is to increase employment, develop skills in accordance with the labour market demands and ensure better labour market administration. This objective aims to enable increased employment in Kosovo through the Public Employment Services, by addressing the challenges of workforce skills and mismatches between demand and supply in the labour market, which will be made possible by strengthening the capacities of the Public Employment Services, expanding the range of services and improving their quality. In the field of vocational training, the focus will be on improving the quality of programs and their better matching with the labour market. For analysis purposes, mediations provided as a service will be divided into:
(i) Regular mediations in employment, and
(ii) Mediations in employment by Active Labour Market Measures (ALMMs).
The total number of employment mediations carried out during 2021 is 6,252 mediations. Most mediations took place through active labour market measures, whereby 3,297 people were mediated during 2021, which, compared to 2020, represent a decrease of 41.4%.[9] However, the case is different for regular mediations, where in this category a significant increase was noted, which is quite positive for public employment services. So, through regular employment, 2,955 persons were mediated or 122.2% more than the previous year. Job Vacancy Filling Rate (JVFR) is approximately 58%. In this context, the comparison with the previous year 2020 reflects a decrease in this job vacancy filling rate reported with a difference of 4 percentage points. The Employment Rate (ER) for 2021 is 7.62%, compared to 2020, there was a decrease of 4.77 percentage points (See Tab. 5).

Table 5. Employment Rate

	2017	**2018**	**2019**	**2020**	**2021**
Unemployment	93.866	95.890	70.790	168.980	82.042
Job vacancies	12.511	14.847	15.647	11.160	10.747
Employments	6.042	6.764	8.771	6.961	6.252
- Regular mediations	3.215	3.764	4.160	1.330	2.955
- Employment mediation by ALMM	2.827	3.000	4.611	5.631	3.297
JVFR	48%	46%	56%	62%	58%
Employment Rate	6.44%	7.05%	12.39%	4.12%	7.62%

The research of the labour market and the registration of all requests coming from the labour market is the result of the daily activity of the employment counsellors. So, all the developments that are related in this context reflect a result of mediations in employment divided by economic sectors. The largest number of employment mediations were made through the processing industry sector and the trade, automobile repair and household goods sector. These two sectors together make up about 48% of all mediations made during 2021. (See Fig. 3).

[9] Kosovo Agency of Statistics, 2021.

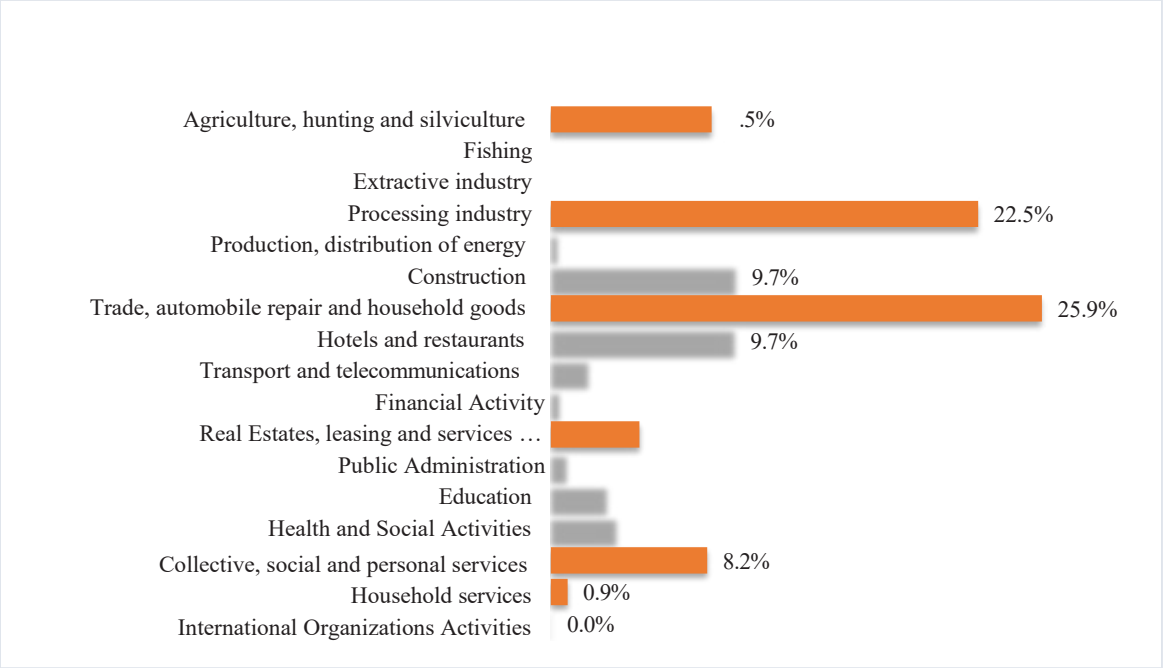
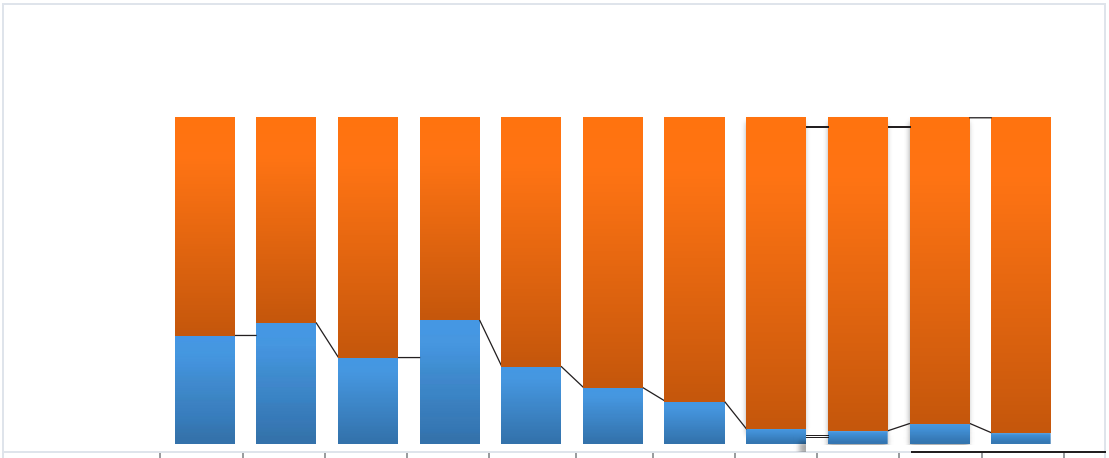


Figure 3. Regular employment by economic sectors

As regards the ownership, it can be concluded that the private sector is dominant in the regular employment rate. Since 2015, there has been a declining trend in employment in the public sector, and a significant increase in regular employment in the private sector. (See Fig. 4).



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
% Private	67%	63%	74%	62%	76%	83%	87%	96%	96%	94%	97%
% Public	33%	37%	26%	38%	24%	17%	13%	4%	4%	6%	3%

Figure 4. Regular employment rate by ownership

By the end of 2021, the private sector has mediated in the employment of 2,864 persons or 97% and, if compared to the previous year, the percentage values have increased by 3 percentage points.[10] Whereas, the number of mediations in employment by occupations presents a more proportional division. The occupations of service and sales workers are dominant with 22.2%, followed then by professionals with 16.3%, elementary occupations with 16.3%, etc. (See Tab.6).

Table 6. Regular employments by occupations

Occupations	Regular employments	Proportion	ER	Difference 2020
Managers	64	2.2%	9.5%	137.0%
Professionals	483	16.3%	7.1%	143.9%
Technicians and professional associates	403	13.6%	5.7%	116.7%
Office workers and assistants	278	9.4%	9.6%	198.9%
Service and sales workers	656	22.2%	9.2%	180.3%
Workers in agriculture, forestry and fishing	113	3.8%	9.0%	22.8%
Employees of crafts and similar occupations	397	13.4%	4.1%	119.3%
Operators and installers in factories and machines	78	2.6%	6.5%	59.2%
Elementary occupations	483	16.3%	1.1%	78.9%
Total	2.955	100.0%	3.6%	122.2%

While the increase in mediations compared to the previous year was reflected in all occupations, the highest increase, however, was recorded in office workers and assistants with 198.8%, then service and sales workers with 180.3%.[11] It should be emphasized that professional skills play a very important role in getting a job. Therefore, mediations in employment carried out through occupations, best show which occupations are most in-demand by employers in the labour market. This is also due to the fact that the labour market is characterized by a strong workforce supply, as estimates show that 30-35 thousand young people enter the labour market every year.[12] Also, according to the latest statistics, the unemployment rate in Kosovo is 25.8% of the working-age population (15-64 years old), which is the highest in Europe.[13] Therefore, employment mediation is considered as an objective and mechanism for reducing unemployment, namely increasing employment. The employment rate for mediations in regular employment mostly refers to the occupation "Office workers and assistants" with 9.6%, then "managers" with 9.5% and "Service and sales workers" 9.2% (See Fig. 5).

[10] Kosovo Agency of Statistics, 2021.
[11] Employment Agency of the Republic of Kosovo, Annual Report, 2021
[12] Kosovo Agency of Statistics, Labor Force Survey in Kosovo, 2021.
[13] *Ibid.*

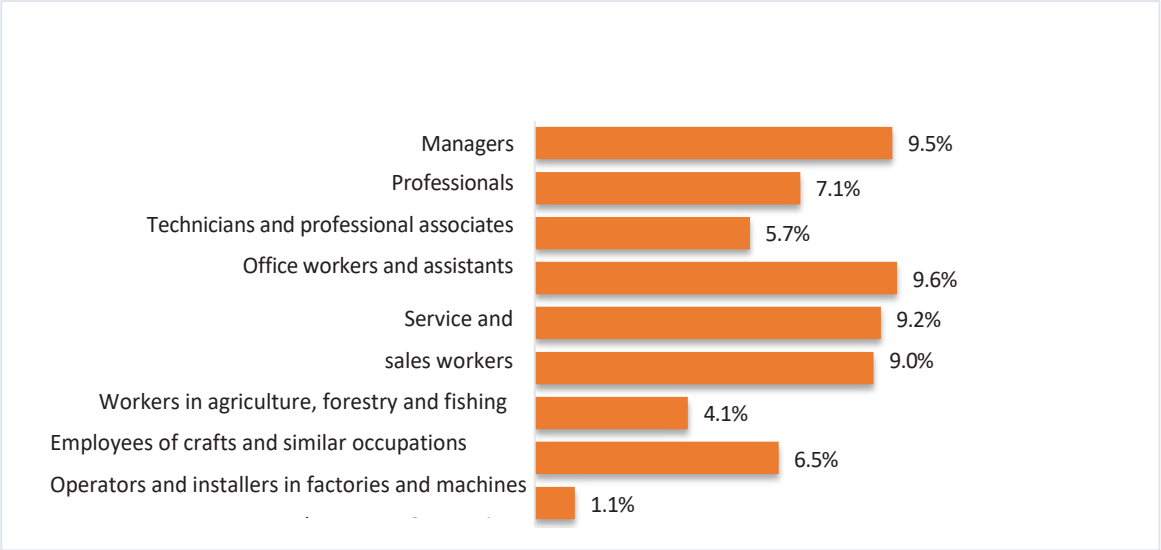


Figure 5. Regular employment rate by occupation

Regarding the issue of regular employment by qualifications, the largest number of mediations was among persons with secondary vocational education, followed by persons with a bachelor's degree and thirdly persons with primary school education. Although the increase in mediations compared to the previous year was reflected in all levels of education, the biggest increase was with persons of secondary school education level with 202.7% and Master degree with 200.0%. (See Tab. 7).

Table 7. Regular employment by qualifications

Level of education	Regular employments	%	ER	Difference 2020
Unqualified	450	15.2%	1.2%	103.6%
Grades I –IX (Primary School)	452	15.3%	2.9%	43.5%
Secondary vocational education	898	30.4%	5.3%	128.5%
Secondary school - Gymnasium	554	18.7%	10.5%	202.7%
Bachelor	568	19.2%	9.6%	174.4%
Master	33	1.1%	6.2%	200.0%
Doctor of Science	0	-	-	-
Total	2.955	100.0%	3.6%	122.2%

The regular employment rate of 10.5% refers to the "secondary school - gymnasium" level, while the lowest rate refers to the unqualified with 1.2% (see Fig. 6).

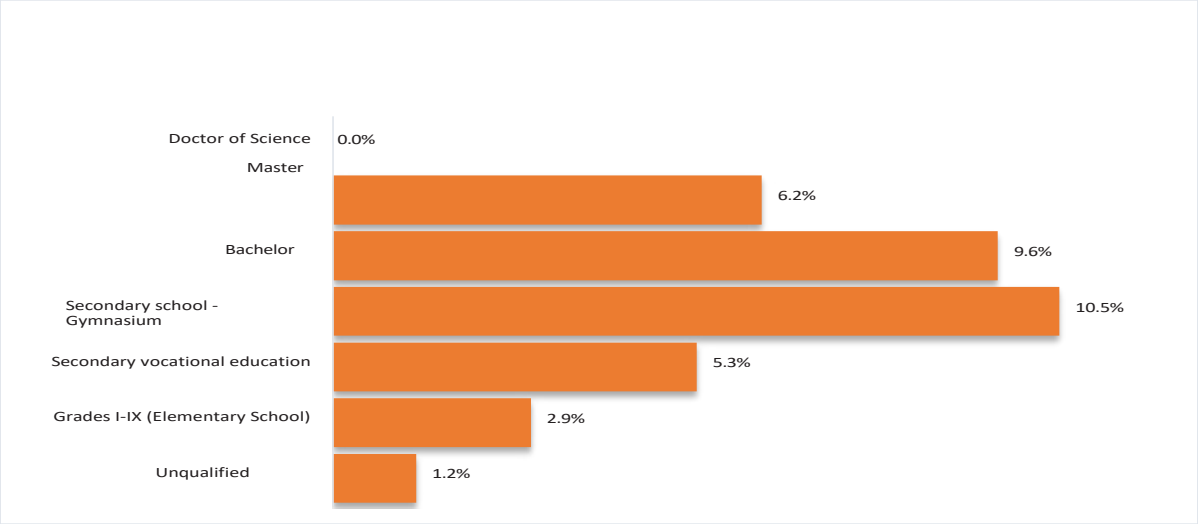


Figure 6. Regular employment rate by qualification

Half of mediations in regular employment were made among persons in the age group of 25-39 years old, who at the same time marked an increase compared to the previous year. The smallest number of mediations was made among persons aged 55+, while the highest increase from the previous year was among persons aged 15-24 with 222.2% (See Tab. 8).

Table 8. Regular employment by age group

Age group	Regular employments	%	ER	Difference 2020
15 – 24	886	30.0%	6.5%	222.2%
25 – 39	1.486	50.3%	4.2%	104.4%
40 – 54	481	16.3%	2.1%	69.4%
55+	102	3.5%	1.0%	131.8%
Total	2.955	100%	3.6%	122.2%

Other active employment measures

Active employment measures play a very important role in the integration of unemployed persons into the labour market. Through active labour market measures, a considerable number of unemployed persons have been mediated, as well as a number of them have been referred to vocational trainings. Other active labour market measures are:

- On-the-job training;
- Internship;
- Employment subsidy;
- Self-employment; and
- Public work.

From the total number of 3,297 mediations in ALMM, the highest number of beneficiaries were persons with Bachelor degree with 1,301 mediations or 39.5%, then secondary vocational school with 1,161 or 35.2%. The largest decrease compared to the previous year was experienced by unqualified persons and persons with secondary school of gymnasium. While other categories with tertiary level of education have reflected growth, where there is an increase with Bachelor degree of 10.1% and with Master degree 28.2% compared to 2020.

CONCLUSIONS

The economic crisis and unemployment in the world constitute a serious concern in the employment policy of every democratic state. In this context, some solutions are required to reduce unemployment. Active labour market measures reflect the great importance these measures have to support unemployment. The main strategic goal of the Government of Kosovo is to increase

employment, in accordance with the labour market demands and better labour market administration. Active employment measures have played a very important role in the integration of unemployed persons into the labour market. Through active labour market measures, a considerable number of unemployed persons have been mediated, as well as a number of them have been referred to vocational trainings. In fact, according to official data, the biggest beneficiaries of active labour market measures are the persons who have undergone vocational training. Therefore, the main objective of the Government of Kosovo is to increase employment through active labour market measures, and in particular through vocational training. Finally, it must be concluded that the active labour market measures through the provision of vocational training in Kosovo have given the right results, which represent the building of a stable employment system, in function of equality and social justice.

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THE ASSESSMENT OF CLASSROOM MANAGEMENT SKILLS IN PRIMARY SCHOOLS

Original scientific paper

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ABSTRACT

This study aims to identify the classroom management skills of primary school teachers who teach in primary schools in the Municipality of Prizren. The study also aims to determine whether classroom management skills vary depending on the gender, work experience, and their level of education. For the chosen topic, quantitative approach/method was applied.The sample of the study consists of 307 teachers from different public and private schools, including schools in urban and rural areas of the Municipality of Prizren. To collect the data for the research problem, we used the survey technique with its instrument, the questionnaire for primary school teachers. The Mann Whitney U Test analysis was used to see among which groups there are differences between teachers' opinions regarding classroom management skills and their teaching experiences. Whereas, to see among which groups there are differences, between teachers' opinions regarding classroom management skills and their teaching experience as well as between the level of the classes where they teach, the Kruskal Wallis H Test was used. The conclusions from the analysis show that there are significant differences between teachers' opinions regarding classroom management skills and the gender of teachers and teachers' experience.

***Keywords**: Management, skills, classroom, teachers*

INTRODUCTION

Classroom management consists of many interrelated and complex dimensions that stem from the classroom and the environment. Fayol (1970) considered that management consists of five functions: planning, organization, leadership, coordination and control. The teacher, as a classroom manager, is expected to lead the classroom as an orchestra by considering these dimensions. According to Lemlech (1988), these are the dimensions of classroom management: the dimension of physical environment management; the dimension of teaching process management; the dimension of time management; the dimension of effective management; the dimension of behavior management; the motivation dimension and the communication dimension. Being able to divide the class into smaller units will ease the issue of classroom management. The main features of managing the physical environment according to Ming-tak and Wai-shing include the organization of floor space, walls, desk, shelves, closet space as well as the classroom environment in general. The seating plan also plays a very important role in the management of the physical environment; it can be organized in rows or columns, in circular form and long rows

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that serve different purposes (Hue & Li, 2008). All good teachers have some sort of plan when they enter their classrooms. Determining what to teach students, in what order and for how long are the basic components of planning. The lesson plan serves as a map or checklist that guides us to know what we want to do next; these sequences of activities remind us our lessons' goals and objectives for our students (Celce-Murcia, 2001). Working as a teacher requires excellent time management skills. Teachers must balance between the long-term goals of the classroom, the immediate educational needs of students, and the voluminous paperwork that comes with each assignment. Between preparing lesson plans, assessing, and teaching, teachers often find it impossible to fit everything into the given time frame (Bates, 2020). Effective classroom management is no different from any other activity or sport that requires participants to follow rules in order to be successful (Yisrael, 2012). When we ask teachers in general what they mean by classroom management, the answers we often get are order, control and discipline. The idea that classroom management is primarily about discipline is a misconception held by teachers that can actually be confused with effective teaching. In fact, effective managers organize their classrooms in such a way that they avoid most behavioral problems and therefore they often have no concerns about discipline (Garrett, 2014). Classroom management is more about preventing problems than solving them, thus reducing the need for intervention (Brophy, 1999). The most helpful thing teachers can do to address problem behavior is to prevent it in the first place. Introducing, modeling and reinforcing positive social behavior is an important step in a student's educational experience. Students are shown the expectations that the school has for their behavior and if they are praised when they behave according to the rules, their behavior will be strengthened in a positive direction (Markja, Mastror, & Janaqi, 2019). Another variable that affects teachers' classroom management skills is the level of motivation (Çerkezi, 2015). Teachers' motivation levels are closely related to the quality of education. Research indicated that motivation level of teachers is positively related to teaching approaches and teaching methods. Based on these studies, it is thought that the motivation level of the teachers can be related to the classroom management profiles. Teachers who are motivated and good classroom managers are also good motivators for their students (Ihtiyaroğlu, 2019). In his book "Motivating Students to Learn" Jere Brophy (2004) states that, students will not respond well to motivational attempts if they are fearful, resentful, or focused on negative emotions within the classroom. To create conditions that favor your motivational efforts you have to establish and manage your classroom as a learning community, a place where students come primarily to learn, and succeed in doing so, through collaboration with you and their classmates. In communication process, teachers can meet the needs in terms of motivation, knowledge, self-reliance, relationships with others or the teacher may cause students to suffer from unwillingness, loss of confidence, belonging and communication desire (Jones, 2007). In the light of many studies, it can be concluded that the communication skills of the teachers are related to their classroom management skills and support both, the development of students and their individual development (Ihtiyaroğlu, 2019). Under the framework of what was mentioned above, the paper aims to identify the classroom management skills of teachers (the dimension of physical environment management; the dimension of teaching management; the dimension of time management; the dimension of effective management; the dimension of behavior management; the dimension of motivation and the dimension of communication), who teach in primary schools in the Municipality of Prizren. The paper also aims to determine whether classroom management skills differ depending on gender, work experience and their level of education. In accordance with the general purpose, answers to the following questions were sought: What is the level of classroom management skills of primary school teachers in the Municipality of Prizren? Are there any differences between teachers' opinions regarding classroom management skills and their gender, work experience and level of education?

METHODOLOGY

For the researched problem, the descriptive research method was chosen from the quantitative approach since this method is more efficient to determine the current situation.

Sample

The research was carried out with teachers who work in primary schools in the Municipality of Prizren. Out of 593 teachers who teach in grades 1-5, from a random sample, about 307 teachers from various public and private schools participated in the research, including schools located in urban and rural areas of the mentioned municipality. Out of a total of 307 participants, 84.4% are female, while 15.6% are male. As for the educational level, 77.5% of teachers have completed the

Bachelor's level, 16.3% the Master's level and 6.2% have completed teachers college. Regarding work experience 21.5% of the respondents have 1-5 years of work experience, 15% have 6-10 years, 13.4% have 16-20 years, 14.3% have 21-25 years, and 19.9% have over 26 years of work experience.

Data collection

For the collection of sufficient data for the research, we used the survey technique with its instrument, the questionnaire for primary school teachers. The questionnaire entitled: "Classroom management for teachers", formulated by (Yuksek & Duman, 2017), has been translated and adapted into the Albanian language. The questionnaire is composed of two parts. In the first part, the socio-demographic data of the respondents is requested, while in the second part, answers to 46 expressions are required, which are mainly related to classroom management skills. The questionnaire is of the "Likert" type with five categories "Never", "Rarely", "Sometimes", "Often", "Always". For the reliability of the questionnaire, the Kronbach alpha analysis was used. The coefficient is quite high Kronbach alpha=0.86, this shows us that the instrument used is very reliable.

Data analysis

The collected data were transferred to the Statistical Program for Social Sciences (SPSS) v.25, where they were processed. Initially, by means of the Kolmogrov-Smirnov test, from the data provided by the teachers, it was determined whether the data show a normal distribution or the opposite. The value obtained from the Kolmogrov-Smirnov test (Sig. =.000, p> .05) shows us that the data obtained from the teachers do not show a normal distribution. To understand among which groups there are differences between teachers' opinions regarding classroom management skills and their gender, the Mann Whitney U Test was used. Whereas, in order to see among which groups there are differences between teachers' opinions regarding classroom management skills and their experience in teaching as well as the level of education of the teachers, Kruskal Wallis H Test was used. The results are presented in tabular form and commented.

RESULTS

Table 1. Value of standard deviation and averages of classroom management skills.

	N	$\bar{X}$	Min.	Max.	SD
Physical arrangement of the classroom	307	4.50	2.33	5.00	0.376
Teaching process	307	**4.45**	3.29	5.00	0.350
Time management	307	4.46	3.40	5.00	0.318
Communication	307	**4.73**	3.86	5.00	0.240
Behavior management	307	4.63	3.33	5.00	0.329
Motivation	307	**4.73**	3.57	5.00	0.235
Assessment of classroom management skills	307	4.62	3.74	5.00	0.222

Table 1 shows the averages and standard deviation values related to classroom management skills. The highest averages, in equal values, are seen in the dimensions of communication (x = 4.73; sd = 0.240) and motivation (x = 4.73; sd = 0.235), while the lowest average is noticed in the dimension of teaching process (x = 4.45; sd = 0.350). The overall mean of classroom management skills is centered on the "Always" option (x = 4.62; sd = 0.222).

Table 2. Differences between teachers' opinions regarding classroom management skills and teachers' gender.

					Mann Whitney U Test	
	Gender	N	$\bar{X}$	$\bar{X}$ Rank	U	p
Physical arrangement of the classroom	Female	259	**4.6667**	161.54		
	Male	48	4.5000	113.31	4.263	.000
Teaching process	Female	259	4.5714	154.92		
	Male	48	4.5714	149.01	5.976	.669
Time management	Female	259	4.8000	153.00		
	Male	48	4.8000	159.38	6.474	.638
Communication	Female	259	4.8571	156.72		
	Male	48	4.7143	139.31	5.511	.202
Behavior management	Female	259	4.6667	155.97		
	Male	48	4.6667	143.36	5.705	.358
Motivation	Female	259	**4.8571**	158.86		
	Male	48	4.7143	127.77	4.957	.023
Overall assessment	Female	259	4.6579	158.22		
	Male	48	4.5789	131.23	5.123	.053

Table 2 shows the results of the analysis of Mann-Whitney U test. The results show us that there are significant differences between teachers' opinions regarding classroom management skills and teachers' gender. We find these differences in the physical arrangement dimension (U = 4.263, p = .000) and in the motivation dimension (U = 4.975, p = .023). In these two dimensions, female teachers have a higher average compared to male teachers.

Table 3. Differences between teachers' opinions regarding classroom management skills and teachers' experience.

				Test Wallis H		Kruskal
	Work experience	**N**	**$\bar{X}$**	**$\bar{X}$ Rank**	**H**	**p**
Physical arrangement of the classroom	1-5 years	66	4.6667	169.00		
	6-10 years	46	4.6667	166.86		
	11-15 years	41	4.5000	150.71		
	16-20 years	49	4.5000	135.48	5.569	.350
	21-25 years	44	4.5000	147.42		
	26 and above	61	4.5000	149.91		
Teaching process	1-5 years	66	4.5714	167.70		
	6-10 years	46	4.5714	158.35		
	11-15 years	41	4.4286	161.60		
	16-20 years	49	4.4286	129.29	7.864	.164
	21-25 years	44	4.4286	138.05		
	26 and above	61	4.5714	162.16		
Time management	1-5 years	66	4.8000	145.02		
	6-10 years	46	4.8000	165.23		
	11-15 years	41	4.8000	146.82		
	16-20 years	49	4.8000	167.01	5.235	.388
	21-25 years	44	4.6000	136.67		
	26 and above	61	4.8000	162.12		

Table 3. Differences between teachers' opinions regarding classroom management skills and teachers' experience (cont.)

	26 and above	**61**	**4.8000**	**162.12**		
Communication	1-5 years	66	**4.8571**	181.82	14.153	.015
	6-10 years	46	4.7143	138.98		
	11-15 years	41	4.7143	148.59		
	16-20 years	49	**4.8571**	166.84		
	21-25 years	44	4.7143	126.16		
	26 and above	61	**4.8571**	148.64		
Behavior management	1-5 years	66	4.6667	156.84	8.383	.136
	6-10 years	46	4.8333	159.45		
	11-15 years	41	4.6667	154.63		
	16-20 years	49	4.6667	156.35		
	21-25 years	44	4.5833	120.70		
	26 and above	61	4.6667	168.52		
Motivation	1-5 years	66	**4.8571**	176.58	11.390	.044
	6-10 years	46	4.7143	139.70		
	11-15 years	41	**4.8571**	155.56		
	16-20 years	49	**4.8571**	168.92		
	21-25 years	44	4.7143	129.25		
	26 and above	61	4.7143	145.17		
Overall assessment	1-5 years	66	4.7237	170.63	6.128	.294
	6-10 years	46	4.7105	157.78		
	11-15 years	41	4.6579	154.49		
	16-20 years	49	4.6053	146.11		
	21-25 years	44	4.5789	129.78		
	26 and above	61	4.6579	156.63		

To identify the differences between teachers' opinions regarding classroom management skills and teachers' experience, the Kruskal Wallis H Test was used. Differences were found in two dimensions, in the dimension of communication (H=14.153, p=.015) and in the dimension of motivation (H=11,390, p=.044). In the dimension of communication, teachers with 6-10 years of work experience as well as teachers with 21-25 years of work experience have a lower average compared to teachers with 1-5 years of work experience, 11-15 years, 16-20 years, and more than 25 years of work experience. We notice that teachers who have 1-5 years of work experience have the highest average in the communication dimension. The same result also appears in the dimension of motivation. Even in this dimension, teachers who have less work experience have a higher average compared to teachers who have more work experience.

Table 4. Differences between teachers' opinions regarding classroom management skills and their level of education

					Kruskal Wallis H Test	
	Education level	**N**	**X̄**	**X̄ Rank**	**H**	**p**
Physical arrangement of the classroom	Teachers college	19	4.3333	104.68	6.618	0.37
	Bachelor	238	4.6667	156.24		
	Master	50	4.6667	162.08		
Teaching process	Teachers college	19	4.4286	134.24	15.840	.000
	Bachelor	238	4.4286	146.16		
	Master	50	**4.7143**	198.82		
Time management	Teachers college	19	4.8000	165.76	4.892	.087
	Bachelor	238	4.8000	148.29		
	Master	50	4.8000	176.73		
Communication	Teachers college	19	4.7143	131.16	9.371	.009
	Bachelor	238	4.7143	148.89		
	Master	50	**4.8571**	187.00		
Behavior management	Teachers college	19	4.6667	132.47	2.817	.254
	Bachelor	238	4.6667	152.45		
	Master	50	4.8333	169.54		
Motivation	Teachers college	19	4.7143	127.42	5.154	.076
	Bachelor	238	4.7143	151.53		
	Master	50	4.8571	175.88		
Overall assessment	Teachers college	19	4.5526	118.63	13.526	.001
	Bachelor	238	4.6316	148.64		
	Master	50	**4.7763**	192.93		

Table 4. shows the differences between the teachers' opinion regarding classroom management skills and their level of education. The differences are noticed in three dimensions, in the physical arrangement dimension (H=6.618, p=.037), in the teaching process (H=15.840, p=.000) and in the communication dimension (H=9.371, p=. 009). Teachers who have completed the Master's level have a higher average compared to teachers who have completed the Bachelor's level and Teachers College.

DISCUSSION

This study aims to identify the classroom management skills of primary school teachers who teach in primary schools in the Municipality of Prizren. The study also aims to determine whether classroom management skills vary depending on the gender, work experience, and their level of education. The findings show us that the overall averages for each dimension of classroom management are at high levels. The teachers showed a higher average in the dimension of communication and motivation, while the average was lower in the dimension of the learning process and time management. High averages in the dimension of motivation and communication are good

indicators for good classroom management and successful teaching. According to research, there is a relationship between motivation and learning, a motivated student can have better results in school (Sieberer-Nagler, 2016; Santrock, 2001). Also, the teacher's verbal and non-verbal communication creates a comfortable and relaxing atmosphere for students, and this helps them to have self-confidence, which also increases participation and contribution to learning (Zeki, 2009). We can conclude that teachers control the physical conditions (temperature, light, noise) in the classroom. During the physical arrangement of the classroom, teachers often take into account the opinions of the students as well as the physical characteristics of the students when arranging their seating plan. Teachers also consider the individual differences of students in the teaching and learning process, they apply methods that allow students to participate actively in the teaching and learning process and they use technology sufficiently. Regarding the time dimension, teachers are punctual, start and finish lessons on time, use all their time for educational purposes, guide students to use their time effectively inside and outside the classroom, manage learning time based on activities and use time effectively during the teaching and learning process. Another important element is teacher-student communication, where we notice that teachers communicate with their students according to etiquette rules, use clear, simple, and understandable language during classroom communication. In addition to understandable language, teachers during classroom communication use body language, gestures, facial expressions as well as their voice. Teachers motivate their students at the beginning of the lesson. All students are encouraged by their teachers to participate in activities. The findings show that there are significant differences between teachers' opinions regarding classroom management skills and teachers' gender. We find these differences in the dimension of physical arrangement and in the dimension of motivation. From this we can mean that female teachers pay more attention to the physical arrangement of the classroom compared to male teachers. Also, female teachers tend to motivate students more than male teachers. The fact that female teachers have a higher average compared to male teachers, may be that female teachers love children more, since they can potentially be mothers and therefore adopt their profession more. Also, the fact that female teachers prefer more the teaching profession and the more positive and moderate approach to their students, may have been effective in showing such a change (Yuksek & Duman, 2017). We also find similar results in the research conducted by Korkut and Babaoğlan (2010), Özgan, Yiğit, Aydın, & Küllük (2011), Ayar & Arslan (2008), Zembat, Tunçeli, & Yavuz (2017). On the other hand, the conclusions drawn from the research done by Yüksel and Duman (2017), for the dimension of communication show the opposite, female teachers have lower average than male teachers. The conclusions of some research prove that there are no differences between the classroom management skills and the gender of the teachers (Okuz, Cevik, Baba, & Guven, 2011; Korkut & Babaoğlan, 2010; Terzi, 2002). Another result from this research has to do with the differences between the classroom management skills and the work experience of the teachers. The general results show that there are no significant differences. The differences are found in two dimensions, in the dimension of communication and motivation. In the dimension of communication and motivation, teachers with 1-5 years, 16-20 years and 26 and more years of work experience, have a higher average compared to teachers who have 11-15 years and 21-25 years of work experience. Since, young teachers with work experience of 1-5 years, are at the beginning of their career, they can be more enthusiastic about their work, but they can also have the updated information from their recent studies. On the other hand, with the increase in years of work experience, classroom management skills also develop. In this context, teachers with more work experience may have gained classroom management skills from many years of teaching experience. Some of the research conducted shows that the levels of classroom management skills vary based on their work experience (Yüksel & Duman, 2017; Yasar Ekinci, Günhan, & Anılan, 2017; Yilmaz & Aydin, 2012; Toran & Akkus, 2016). The differences between teachers' opinions regarding classroom management skills and education level are present in three dimensions: in the dimension of physical arrangement, in the dimension of the teaching process and in the dimension of communication. Teachers who have completed the Master's level have a higher average compared to teachers who have completed the Bachelor's level and Teachers college. This may be as a result of the additional subjects they attended at the master's level. However, since in other dimensions of management there are no statistically significant differences between teachers who have a bachelor's degree in education and teachers who have a master's degree, it recalls the idea that there are not

many differences between the subjects taught in bachelor's and master's studies. However, we should not overlook the fact that the number of respondents plays an important role, since a higher percentage of respondents have a bachelor's level of education. Therefore, it is welcome to carry out research where a large number of teachers with different level of studies participate, but also with an approximate number. In some research, the results have shown that there are no differences between classroom management skills and the level of education of teachers (Zembat, Tunçeli, & Yavuz, 2017; Yalçınkaya & Tombul, 2002). In the research that can be developed in the future related to this topic, it is necessary to include a larger number of teachers along with additional variables. In further research, it would be more advantageous to use other research approaches and methods, through which more generalizable results could be obtained. Also, for the sample to be as representative as possible, the participation of subjects from different parts of Kosovo would be fine. In addition to the teachers, it would be welcome to also take into consideration the opinions of the students.

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PHONEME RECOGNITION AND CONFUSIONS IN PATIENTS WITH SENSORINEURAL HEARING LOSS

Original scientific paper

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ABSTRACT

Hearing impaired listeners show different phoneme confusions during speech recognition testing. The aim of the study was to analyze phoneme recognition in patients with sensorineural hearing loss during word recognition testing with monosyllabic words, as well as, to compare consonant confusions in different vowel context. Recognition of 18 initial and final consonants was analyzed in a total of 698 presentations of the words. There were 1154 (82.7%) correct recognitions and 100 consonant confusions (7.2%). The patients did not response at a total of 71 presentations of the words which means that consonants in 142 cases (10.2%) were not recognized, nor confused. There are no consonant confusion patterns during suprathreshold testing with real words. In cases of phoneme confusions, listeners replace the stimulus word with another word from the lexical neighborhood. In terms of the vowel context, the consonants are the most easily identified in the context of the vowel /a/.

***Keywords**: phoneme, recognition, sensorineural hearing loss, speech audiometry*

INTRODUCTION

Speech is a complex acoustic signal that is continuously changing in frequency, intensity, and time. The acoustic speech signal received by a listener is a function of the source, distance, early reverberation, late reverberation, and noise (Boothroyd, 2004). Unlike speech production which is a process of converting a linguistic message into speech, speech perception is the process of determining the message from the speech (Taylor, 2009). Communication by speech is the transmission of thoughts or feelings from the mind of a speaker to the mind of a listener. Listeners use more than acoustic information when they receive a spoken message. They use their knowledge of the speaking situation and their knowledge of the speaker, as well as visual cues obtained by watching the face and gestures of the speaker. No matter how a listener analyzes a message, the data on which he or she operates are the acoustic patterns of speech. The essential step, then, is that

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the listener hears the speech (Raphael et al., 2011). Speech perception can be influenced by information from different senses. The McGurk effect is one example of audiovisual speech perception. Although auditory information is the major source of information for speech perception, visual information can also exert a strong influence on what we hear. Another example is the way people routinely use information provided by the speaker's lip movements to help understand speech in a noisy environment (Goldstein, 2010). The phoneme is the smallest unit of sound which can differentiate one word from another, in other words, phonemes make lexical distinctions (Ogden, 2009). Vowels and consonants are two categories of speech sounds existing in all languages. Vowels contribute most of the energy, which occurs mostly at low and mid frequencies, while consonants contribute most of the intelligibility, which is largely dependent upon middle and higher frequencies. Vowels generally are of longer duration than are consonants (Lawson & Peterson, 2011). We cannot define speech perception very narrowly in terms of phoneme perception or nonsense syllable identification. It is important to analyze how we identify spoken words and comprehend sentences in connected fluid speech (Cleary & Pisoni, 2005). A large amount of research has shown it is easier to perceive phonemes that appear in a meaningful context. If a phoneme is at the beginning of a real word, it is identified faster than when it is at the beginning of a meaningless syllable. Just as the perception of phonemes is aided by the meanings of words, the perception of words can be aided by the sentences in which they occur (Goldstein, 2010). There are three lines of experimental evidence indicating that listeners do not, and indeed cannot perceive phonemes in running speech directly, but that their presence is inferred following prior identification of larger units: (1) an inability to distinguish between speech sounds that are "heard" when replaced by noise (the phonemic restoration effect) and those physically present; (2) the need to identify syllabic organization before identifying constituent phonemes; and (3) the inability to identify brief phonetic components (steady-state vowels) when chained together into a sequence, even though they are readily recognizable when presented singly (Warren, 2008). Any model of speech perception for running speech must account for the modifications that may be introduced by prosodic factors, by the introduction of enhancing gestures, and by gestural overlap (Stevens, 2005). The prosodic features of speech, including intonation, stress, and juncture, are perceived by listeners in terms of variations and contrasts in pitch, loudness, and length (Raphael et al., 2011). The main problem in understanding speech perception is that there is a variable relationship between the acoustic signal and the sounds we hear. A particular acoustic signal can produce a number of different sounds. The acoustic signal associated with a phoneme changes depending on its context. The formant transitions, which are the acoustic signals associated with the same consonant, are very different depending on the vowels in the context. This effect of context occurs because of the way speech is produced (Goldstein, 2010). Coarticulation, the modification of the speech signal associated with a particular sound by prior and subsequent phonetic segments, significantly influences word recognition processes (Archibald & Gathercole, 2007). Coarticulation can be partially understood as a necessary result of the articulators moving into position for an upcoming sound even while the current sound is still being produced. Both anticipatory and perseverative types of coarticulation exist (Cleary & Pisoni, 2005). The second variability between phonemes and the acoustic signal is the variability from different speakers. People say the same words in a variety of different ways. Some people's voices are high pitched, and some are low pitched; people speak with accents; some talk extremely rapidly, and others speak extremely slowly (Goldstein, 2010). Speech intelligibility is a relative measure of the degree to which a speaker's speech signal is understood, the relatively depending at a minimum on the identities of speaker and listener, what is spoken and where it is spoken (Weismer, 2008). A frequency of 2000 Hz is the key frequency for speech intelligibility. At 2000 Hz, plus or minus ½ octave, the following speech information is available: F2 and F3 information for vowels, consonant-vowel (CV) and vowel-consonant (VC) transition information, acoustic information for the laterals, plosive bursts, affricate bursts, and fricative turbulence. The important acoustic cues for place of articulation are available at 2000 Hz (Flexer, 1993). Most of the information transmitted by speech lies above 1000 Hz. Intelligibility concentrates on the information-carrying content of the speech because it is a measure of how understandable the speech is. Speech intelligibility is measured by the ability of listeners to correctly identify words, phrases or sentences. It may be also tested in terms of phonemes, syllables, and paragraph meaning. In general we can say that the smaller the unit tested, the more able we are to relate the results to individual parts of speech. Several factors play an important role in the understanding of speech. Contextual information compensates for an ex treme lack of original information. Redundancy,

in which information is imparted in more ways than would normally be necessary, has effects similar to contextual constraint. Spoken vocabulary size has the effect on the intelligibility of speech. There is a large improvement in recognition when vocabulary size is constrained whether artificially, or by context (McLoughlin, 2009). There are different test for speech intelligibility assessment. Speech audiometry is a method used to evaluate how well a patient can hear and understand specific types of speech stimuli (Kramer & Brown, 2019). The threshold for speech can mean the lowest level at which speech is either just audible or just intelligible. The lowest level at which the presence of a speech signal can be heard 50% of the time is called the speech detection threshold (SDT). In contrast, the lowest level at which the speech signal is intelligible enough to be recognized or identified 50% of the time is the speech recognition threshold (SRT). The SRT is usually obtained by asking the patients to repeat spondee (or spondaic) words, which are two-syllable words that have equal stress on both syllables (Gelfand, 2016). Word recognition testing can be used for assessment of suprathreshold speech understanding. Word recognition score (WRS) is the most common suprathreshold measure (DeRuiter & Ramachandran, 2017). There are two scoring methods in speech audiometry: whole-word scoring and phoneme scoring. Phoneme recognition is studied by presenting nonsense syllables and real words. Erroneous phonemic replacements in CVC words are highly affected by linguistic knowledge. Consonant confusions are best predicted by lexical information, that is, when part of the upcoming speech signal is missing, listeners tend to fill in the gap by picking out one of the stimulus word's phonological neighbors which are part of their mental lexicon (Coene et al., 2015). The errors produced during phoneme recognition are categorized as substitution, deletion, and insertion (Bhatt et al., 2020). Woods et al. (2015) found that most of the older hearing impaired listeners with mild to moderately severe hearing loss showed significant elevations in consonant identification thresholds. The listeners were more accurate in identifying consonants in syllables containing the vowel /ɑ/, than in syllables containing the vowel /u/, or particularly the vowel /i/. The aim of the study was to analyze phoneme recognition and confusions in patients with sensorineural hearing loss during word recognition testing with monosyllabic CVC words, as well as, to compare consonant confusions in different vowel context.

METHODS

This prospective study included a sample of 86 patients with hearing loss, aged 14 to 75 years (mean age of 58.7±12.1 years), examined at the Department of Otorhinolaryngology, Division of Audiology, City General Hospital "8th September" Skopje. Inclusion criterion was unilateral or bilateral sensorineural hearing loss. Patients with conductive and mixed hearing loss were excluded because of the possibility to obtain normal word recognition scores at higher intensity levels in cases of conductive hearing loss. Pure tone audiometry and speech audiometry were performed with MADSEN Astera2 audiometer (GN Otometrics, Denmark) and Sennheiser HDA 300 (Sennheiser electronic, Germany) circumaural earphones in sound proof booth. Hearing threshold was obtained with modified Hughson-Westlake technique for frequencies from 125 to 8000 Hz. Word recognition score was determined at the level 25 to 40 dB above the speech recognition threshold with recorded speech materials: Ristovska and Jachova Monosyllabic Test 1 and Test 2. The words were pronounced by a female speaker. Word recognition testing was performed in quiet with whole-word scoring method. We conducted additional analysis of phoneme recognition in nine monosyllabic CVC words in context of the vowels /a/, /u/, and /i/: шал (ʃal / scarf), час (ʧas / hour), пат (pat / road), југ (jug / south), сув (suv / dry), туѓ (tuʝ / foreign), рид (rid / hill), зид (ʣid / wall), and вир (vir / puddle). Transcription of Macedonian Cyrillic letters into International Phonetic Alphabet (IPA) symbols and English translation are provided in parentheses. The study was approved by the Ethics committee of City General Hospital "8th September" Skopje. The Protocol number of Ethical approval is: 24/89-1/2019.

RESULTS

Baseline demographic and clinical characteristics of patients are displayed in Table 1. Unilateral sensorineural hearing loss was present in 16 patients (18.6%) and 70 patients (81.4%) had bilateral hearing loss. A total of 156 ears were analyzed. Sixteen ears of patients with unilateral sensorineural hearing loss were excluded. In terms of the degree of hearing loss, mild hearing loss was the most common (75%). Sloping was the most common audiometric configuration (58.3%).

Table 1. Baseline demographic and clinical characteristics of the patients

Characteristics	No (%)
Age (Years)	58.7±12.1 (Mean±SD)
Gender	
Male	37 (43)
Female	49 (57)
Side of hearing loss	
Unilateral right	4 (4.7)
Unilateral left	12 (14)
Bilateral	70 (81.4)
Degree of hearing loss (156 ears)	
Mild	117 (75)
Moderate	29 (18.6)
Severe	10 (6.4)
Audiometric configuration (156 ears)	
Rising	1 (0.6)
Sloping	91 (58.3)
Flat	26 (16.7)
Notch	27 (17.3)
"U"-shaped	11 (7.1)

Recognition of 18 initial and final consonants was analyzed in a total of 698 presentations of the words. There were 1154 (82.7%) correct recognitions and 100 consonant confusions (7.2%), i.e. replacement of the stimulus phoneme with another phoneme. Consonant confusion matrix with responses on the stimulus phoneme (S) is displayed in Table 2.

Table 2. Confusion matrix for initial and final consonants

S	Response																	
	t	d	s	v	r	ʧ	l	p	j	g	ʤ	ʃ	ʣ	f	ʒ	k	b	z
t	135	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d	2	129	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
s	0	5	127	0	0	0	0	0	2	0	0	0	0	0	0	0	4	3
v	0	2	0	124	0	0	3	0	0	0	0	0	0	9	0	0	0	0
r	0	0	0	3	121	0	9	0	0	0	0	0	3	0	0	2	0	0
ʧ	0	0	0	0	0	75	0	0	0	0	0	0	0	0	0	0	0	0
l	0	0	0	0	0	0	69	0	0	0	0	0	0	0	0	0	0	0
p	0	0	0	0	0	0	0	66	0	0	0	0	0	0	0	0	3	0
j	0	0	0	0	0	0	6	0	64	0	0	0	0	0	0	0	0	0
g	0	0	0	0	0	0	0	0	0	64	0	0	0	0	0	6	0	0
ʤ	0	0	0	0	0	0	7	0	0	0	64	2	0	0	0	0	0	0
ʃ	0	0	0	0	0	0	0	0	0	0	0	61	0	0	8	0	0	0
ʣ	0	0	0	7	5	0	0	0	0	0	0	0	55	0	0	0	0	0

The patients did not response at a total of 71 presentations of the words which means that consonants in 142 cases (10.2%) were not recognized, nor confused. In Figure 1 we displayed frequency of occurrence of Macedonian phonemes in order to compare the frequency of occurrence of the phonemes and their recognition rate. The most frequent consonant in Macedonian language is the plosive /т/ (t). This consonant has high recognition rate. The most frequent phoneme in Macedonian language is the vowel /a/ (a).

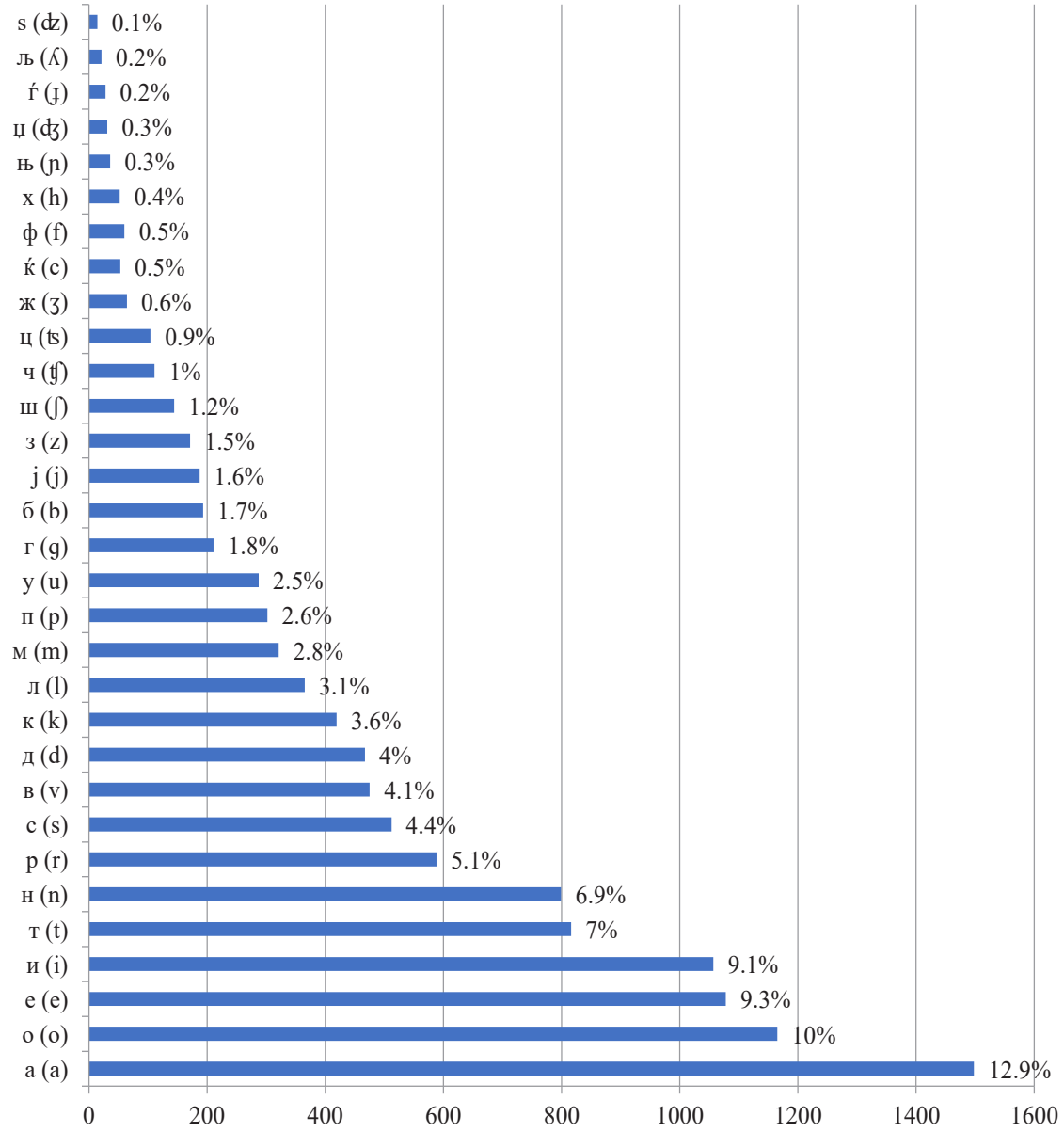

Figure 1: Frequency of occurrence of Macedonian phonemes

Consonant recognition was analyzed according to the manner of articulation (Table 3). Some consonants were recognized as consonants with a different manner of articulation.

Table 3. Consonant recognition according to the manner of articulation

Stimulus phoneme	**Fricative**		**Affricate**		**Plosive**		**Lateral**		**Total**	
	No	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**
Fricative	522	41.6	3	0.2	13	1	18	1.4	556	44.3
Affricate	14	1.1	194	15.5	/	0	7	0.6	215	17.1
Plosive	5	0.4	/	0	409	32.6	/	0	414	33
Lateral	/	0	/	0	/	0	69	5.5	69	5.5
Total	541	43.1	197	15.7	422	33.7	94	7.5	1254	100

Fricative /c/ (s) was confused with plosives /д/ (d) and /б/ (b). Plosive /т/ (t) was confused with fricative /c/ (s). Fricative /j/ (j) was recognized as lateral /л/ (l). Fricative /в/ (v) was confused with fricative /ф/ (f) and lateral /л/ (l). Affricate /ŕ/ (ʝ) was confused with fricative /ш/ (ʃ) and lateral /л/ (l). Fricative /p/ (r) was confused with affricate /s/ (ʣ), plosive /к/ (k) and lateral /л/ (l). Plosive /д/ (d) was recognized as fricative /c/ (s). Affricate /s/ (ʣ) was confused with fricatives /в/ (v) and /p/ (r). There were frequent fricative confusions in cases of sloping audiometric configuration. Consonant recognition was analyzed according to the place of articulation (Table 4). Stimulus phoneme sometimes was confused with a consonant with a different place of articulation.

Table 4. Consonant recognition according to the place of articulation

Stimulus phoneme	Alveolar		Dento-alveolar		Bilabial		Palatal		Velar		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
Alveolar	265	21.1	12	1	3	0.2	/	0	2	0.2	282	22.5
Dento-alveolar	5	0.4	534	42.6	11	0.9	2	0.2	/	0	552	44
Bilabial	/	0	5	0.4	202	16.1	/	0	/	0	207	16.5
Palatal	2	0.2	13	1	/	0	128	10.2	/	0	143	11.4
Velar	/	0	/	0	/	0	/	0	70	5.6	70	5.6
Total	272	21.7	564	45	216	17.2	130	10.4	72	5.7	1254	100

In terms of the voicing, voiced consonants were confused with their unvoiced counterparts and vice versa. There were also confusions with other voiced or unvoiced consonants or sonants. Consonant recognition was compared in different vowel context. In Figure 2 we displayed mean consonant recognition score with standard deviation error bars. Consonants in context of the vowel /a/ (a) were slightly better recognized than consonants in vowel context /y/ (u) and /и/ (i). The vowels were rarely confused. The vowel /y/ (u) was confused with the vowel /o/ (o) three times. Other vowels were correctly recognized except the vowels in 71 presentations with no response at the stimulus word.

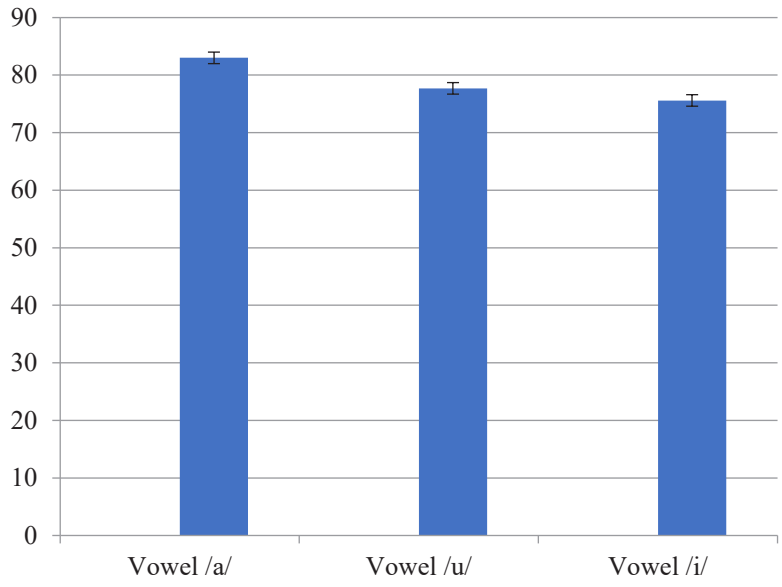

Figure 2: Mean consonant recognition score in different vowel context with SD error bars

DISCUSSION

We analyzed phoneme recognition and confusions in patients with sensorineural hearing loss. The monosyllabic CVC words were presented during word recognition testing. There was a correct consonant recognition in majority of cases. We could explain this with the high percentage of mild hearing loss in the sample. Majority of patients with mild hearing loss have normal word recognition performance. Normal WRSs are also obtained in cases of moderate hearing loss (Ristovska & Jachova, 2021). In terms of the frequency of occurrence of Macedonian phonemes we can notice that the most frequent phonemes in the language are easily recognized. Frequency of occurrence of the phonemes was calculated in our previous research (Ristovska & Jachova, 2021). Woods et al. (2015) divided a total of 21 consonants in three groups based on the signal-to-noise ratios (SNRs) required for their identification. Group A consonants (/t/, /s/, /ʃ/, /ʧ/, /z/, /ʤ/ and /r/) are identified at the lowest SNRs. Group B consonants (/k/, /f/, /d/, /g/, /m/, /n/ and /l/) are of intermediate difficulty, and group C consonants (/p/, /ɵ/, /b/, /v/, /h/, /ð/ and /ŋ/) are the most difficult to identify. Group A and Group B consonants are somewhat more common in conversational speech than group C consonants. Consonant recognition was analyzed according to the manner of articulation and the place of articulation. Some consonants were recognized as consonants with a different manner of articulation or different place of articulation, but there was no typical pattern in this recognition. Analysis of voicing showed that voiced consonants were confused with their unvoiced counterparts and vice versa. There were also confusions with other voiced or unvoiced consonants or sonants. The perceptually significant consonant confusions are /m/-/n/, /b/-/v/, /s/-/z/, and /b/-/c/ (Phatak & Allen, 2007). Word recognition may be influenced by phonetic variables (place, voicing, manner) and lexical variables (word familiarity, word frequency, neighborhood frequency, and neighborhood density) (Jerger, 2008). Psycholinguistic experiments typically make the simplifying assumption that two words are "similar" if they differ by a single phoneme (insertion, substitution, or deletion). Such pairs are referred as neighbors. Early on, it was shown that both the number of neighbors of a word and the frequency of those neighbors are significant predictors of recognition performance (Goldwater et al., 2010). There were frequent fricative confusions in cases of sloping audiometric configuration. Given a similar degree of loss, the configuration of hearing loss also affects the ability to use speech in formation in different frequency regions (Hornsby et al., 2011). The identification of consonants depends on the audibility of mid- and high-frequency acoustic cues that are directly related to the listener's corresponding audiometric thresholds (Fogerty et al., 2012). Most of the acoustic cues that differentiate consonants lie in the interval of about 1500 to 6000 Hz, and although the intensity of these cues is weak in absolute terms compared to those of vowels, the human auditory system's increased sensitivity in this range partially compensates for this fact (Cleary & Pisoni, 2005). Consonant confusion matrix showed good recognition of several plosives and fricatives. The plosive perception provides the best example of how listeners use the acoustic overlapping of phonemes in the speech stream to perceive speech. The acoustic cues for the plosives overlap the acoustic cues to neighboring vowels and consonants. As result of this overlap, listeners perceive plosives and the sounds adjacent to them on the basis of their acoustic relationship to one another. Listeners identify a fricative because they hear a noisy, aperiodic component of relatively long duration. Because affricates are plosives with a fricative release, they contain the acoustic cues to perception that are found in both plosives and fricatives. The silence, the release burst, the rapid rise time, the frication, and the formant transitions in adjacent sounds are all presumably used by listeners in identifying affricates. For the perception of laterals usually the first three formants are required (Raphael et al., 2011). There were no lateral confusions in our sample. Consonant recognition was compared in different vowel context. Consonants in context of the vowel /a/ (a) were easily recognized than consonants in vowel context /y/ (u) and /и/ (i). The vowels were rarely confused in our sample. Vowels are among the most perceptually salient sounds in language. They are usually voiced and thus relatively high in intensity. Listeners usually required only the first and the second formants to identify a vowel, but they can use also information from the fundamental frequency (Fo) and from the third formant (Raphael et al., 2011). Formants are concentrated regions of acoustic energy created through the enhanced intensity of certain harmonics of Fo and the attenuation of other harmonics due to the natural resonance characteristics of the vocal tract. The relative

positioning of the two or three lowest frequency formants over time helps to perceptually distinguish the different vowel sounds (Cleary & Pisoni, 2005).

CONCLUSION

There are no consonant confusion patterns during suprathreshold testing with real words. In cases of phoneme confusions, listeners replace the stimulus word with another word from the lexical neighborhood. In terms of the vowel context, the consonants are the most easily identified in context of the vowel /a/.

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OVERCOMING THE STUDENT'S SPEAKING ANXIETY DISORDERS THROUGH PLAYBACK THEATRE THERAPY

Original scientific paper

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ABSTRACT

In India, English language teachers encounter numerous challenges while developing speaking skill of the learners in rural and semi-urban regions. There are many activities like role-play, theatre and drama to improve the oral competence of the second language learners of English. Playback theatre is an improvisational theatre technique where the participants will enact and perform the stories on the spot. Playback theatre therapy training may prove as a crucial factor in overcoming affective filters while speaking and learners may gain better development and awareness of language expressions in English. This process will aid in the development of their communication skills. Anxiety, motivation, and self-confidence are identified as factors that affect the speaking performance of students. Anxiety is a feeling defined by nervousness, perplexity, and fear. When students are anxious, they are often reluctant to speak and fear making mistakes. Anxiety disorder would prevent the oral performances from being consistent. Majority of the learners at the undergraduate level quite often encounter anxiety when they speak in English. So, playback theatre therapy training as a workshop was organized to identify the relevance of such activities to improve the speaking skills of the learners. The participants of the study are from Undergraduate programme in Vellore district. The sampling method employed in the study is purposive sampling method. 38 participants were selected as the samples for this study. The playback theatre activities like warm up, introducing myself with an adjective, taking someone's place, becoming the object, fluid sculpt, tableau and metaphor was employed as the intervention to improve the speaking skills and alleviate the speaking anxiety among the learners. The study concludes that Playback theatre activities have a considerable impact on learners' anxiety level, expressiveness and attentiveness, composure, and speech naturalness.

***Keywords**: Playback theatre, Anxiety, Speaking skill, Expressiveness, Attentiveness*

INTRODUCTION

In India, English language teachers face a lot of challenges. The challenge is more when it comes to rural and semi-urban areas. Here, the role of the teacher is very important, as the student looks up to the teacher as a role model for all the learning needs. First of all, the teacher should be capable of identifying the practical requirement of the learner, where the teacher is expected to implement methods. This would enable the learner to be competent enough, to interact and retrieve information

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from all over the world, and as well understand it. Therefore, the teacher's role and responsibility repose with both average and above-average students, and with slow learners and below-average students. The quality of an efficient teacher, in handling classes for each and every student in the classroom, by giving equal attention to all the individuals, helps them solve many problems that take place in a class. The need for efficient English language teachers arises, when the students' need for developing self-confidence increases. English teachers should encourage the students to speak only in English, in order to help them develop self-confidence. Hence, the English language teacher's role gains momentum at this juncture. The students need to be trained for participative learning, so as to solve all the stumbling blocks, namely; usage of good vocabulary, and comprehending and speaking the ideas that are to be conveyed fluently.

A. English Language Teaching and Learning

Teaching and learning are not a one-way process. It includes various methods and methodologies. Some of the conditions under which English is taught and learnt today in India, sounds light- hearted but, the point which Nehru emphasized, seems to be of great intensity. His idea was such that, the not-so-imaginable boundless segments and the diverse and the democratic demonstration, that the nation is engaged in teaching and learning English in India, is the largest democratic endeavour in the universe. The pressure of pluralism, population and variation in different areas of life, political compulsions, and lack of infrastructure, illiteracy, conferred interests and the difficulties of training teachers are an amalgamation of the aforementioned. This makes English language teaching in modern India an extremely complex activity.

B. Theatre in Education

In 2013, the Central Board of Secondary Education (CBSE) introduced Theatre Studies in Class XI as an elective subject. It was introduced as a pilot course into the curriculum. It is mentioned in the letter that theatre is considered to be the strongest medium of expression and is old as mankind. The theatre manifested itself into infinite forms around the world. The education board and many principals of schools adhered to theatrics and drama, which provided resources to the board, to mention that, "Theatre can also play an important role in reinforcing and furthering the learning of other academic subjects which are taught in conventional ways and, it concretizes issues that would otherwise remain abstract and difficult for children to grasp. It puts life back into bookish learning." Students always pick a range of theatre-based skills and "experiment in different ways of responding to and performing drama". It shows differing degrees of conventionalization, including sign language, gestures, and complex music and dance. When English theatre started emerging in the colonial cannon during the 1850s, a new mode of entertainment came to exist, along with the influence of the British. It was widely called the theatre company because of the organization, and had not-so-familiar components such as the visual and technical aspects. The Auditorium/stage greatly demanded coordination and the actors started adjusting to them. Theatre enthusiasts started assimilating the art by copying previously from the British, and then started to learn the job, where they were supervised by their seniors and often by the actors and the managers. Some organizations had their own teachers for music and dance, who taught the beginners as well as the artists, in a strictly disciplined manner. Furman (2000) identifies the gap between understanding the values of theatrical activities' use and its application in the language classroom. Teachers hesitate to embrace the methods of using theatre and drama in the classroom for some reasons. A few reasons are summarized below:

1. Instructors are over-awed by the jargons used in theatrics and drama, while searching drama resources for developing curricula, including creative dramatics, drama, process drama, developmental drama, improvisational drama, educational drama, informal drama, improvisation, drama in education, classroom drama, etc.
2. Theatrical activities pretend to be at the "edge" of the curriculum; they seem unnecessary and time-consuming.
3. Since the education Programme for the mentors do not afford courses in relation with theatre and drama, the instructors find it difficult in facilitating theatrical activities.
4. Since the unscripted plays and such activities are playful, the instructors might be frightened that the learners will not be serious in getting educated.

C. Significance of Playback theatre

Martinez (1993) observes that DSRs (Dramatic Story Re-enactment) are prospectively powerful tools to foster young children's narrative proficiency that allows children: To sharpen their sense of how a story "works," and how the elements of character, plot, action, and setting work together. Through the dramatic retelling of a story, children develop what Applebee (1978) calls their "mastery of the underlying conventions which govern the exchange between author and

audience." (Miccinati & Phelps, 1980, p. 270) Young children must develop a sense of how stories are organized, for this sense of story structure gives the reader (or listener), a clear-cut advantage in processing and recalling stories. Drama serves as a conduit for the verbal and bodily medium, particularly for students who have no means of expressing themselves; neither feelings nor comprehension of what they might have learned or read. They can express the ideas originally from their intellect and thinking. Creativity in drama is an integral part of interpreting directions, which allows children a chance to pose a story / plot with their speech. Creativeness in any medium motivates the students in reading and re-reading to understand the plot better and also allows them in improving their ideas of how stories, elements, characters, actions, and setting work together. Though many researchers have accentuated the enormous effect of theatre and drama, it can have students' affective and cognitive development and as well, provide many resources for teachers. And yet, a gap exists, to understand its importance and to apply it (Furman, 2000). Despite everything weakens, the reason why educators try to grasp the thoughts and ideas of using drama and theatre in classroom exercises, can be summed up as follows: (1) while seeking drama means to enhance curricula, the educators could be swamped easily by a few jargons used in theatre. Drama can be listed as a developmental drama, process drama, creative drama, improvisation, creative dramatics, educational drama, improvisational drama, informal drama, drama in education, classroom drama, and so on. (2) The drama activities are more likely located at the "edge" of the endorsed curricula and they seem unnecessary and as well, consume time. (3) Many teacher-education programmes do not offer drama and theatre-related courses because; the instructors usually are unacquainted in enabling dramatics. (4) Most dramatic events are truly spirited and several instructors shy away, thinking that the children might take education impishly and not otherwise (Furman, 2000). Lurtha Simran (2011), in an article on Theatre in Education, examined The National Focus Group Position Papers. The viewpoints analogous to training are an extraordinary vault of thoughts, assumptions and rules for the instructors, to comprehend and continue to educate various branches of knowledge. The position paper committed to Arts, manages theatre and explains the practices and probabilities of joining theatre and classroom. This summons, what is known as the 'Sensitivity Pyramid through Drama'. Setting up Self Realization or looking for truth is a definitive objective of people with craftsmanship. Specifically, the specialty of dramatization encourages one to accomplish this. Karivc and Radovanovic (2012) affirm that applied theatre activities provide "positive reactions of participants, satisfaction with themselves and their abilities and increase in self-confidence". Steele and Lin (2013) conclude that theatre activities enhance the learner's communication relieving them from anxiety level.

D. Playback Theatre in Improving English Language

Aden (2014) affirms that playback theatre plays a crucial role to develop empathy in education among English language learners, as it would help the English language learners in developing communication skill. Vallack (2015) confirms "Theatre as Education works as both an engaging pedagogy for teachers, and an innovative framework for the presentation of primary research". Redington and Christine (2016) affirms that theatre education involves the learners with physical and mental involvement. Sarah (2018) confirms that "the application of certain drama activities they were able to bond and train their English-speaking skills on a collaborative basis, such as, when creating artistic profiles about each other, or transforming personal content or that of their peer into artistic form". Satu (2020) put forth that "the art of listening in Playback Theatre from the conductor's perspective, mirrored against the theory of active empathetic listening (AEL), which includes three aspects: sensing, processing and responding". Flor and Juan (2006) affirm that through effective speaking activities and tasks, learners develop the communicative competence. "The key role of the speaking skill in developing learners' communicative competence has also become evident, since this skill requires learners to be in possession of knowledge about how to produce not only linguistically correct but also pragmatically appropriate utterances" (Flor, 2006). Guttman (2004) employs "Integrated skill reinforcement" as "academic strategy" to develop language learners LSRW skills. He incorporates "skill-based strategies" to improve linguistic competence in American Nurse with limited English knowledge. Hussein and Obaid et al (2016) employs skype as a social tool for networking tool to develop English language learners discourse competence. "The results showed that Skype chat had a positive impact on the English major learners' discourse competence. Learners who studied Skype chat performed better on the discourse aspects of English post-test".

E. Playback Theatre in Overcoming Anxiety Disorders While Speaking

Second language Learners learning English are

hesitant to communicate in English. Speaking is considered the most difficult skill. Anxiety, drive, and self-confidence are significant elements that influence the speaking performance of the learners. Anxiety is a sensation characterized by anxiety, nervousness, and confusion (Horwitz et al, 1986). When learners are anxious, they tend to be reluctant to talk and even fearful of making mistakes. This condition would interfere with the consistency of oral performances. Students have speaking difficulties such as anxiety, nervousness, fear of making mistakes, and shyness when communicating in English (Çağatay, 2015). English language anxiety is related to the proficiency and performance of learners. A high-level language anxiety affects communication apprehension, which causes learners to be afraid to communicate in English. Anxiety is characterized by a sensation of apprehension and physical manifestations such as perspiration, a rapid heartbeat, and difficulty communicating as a result of doubt in one's communication skill (Rajitha & Alamelu, 2020). Both low-proficiency students and high-proficiency students experience anxiety during their oral presentation. It depends on how students utilize their own methods to alleviate public speaking nervousness. Anxiety about public speaking can impact language acquisition, particularly performance. Students experience anxiety when they are trying to communicate in English. In previous studies, data indicated that speaking anxiety led to many types of speaking performance among students. The Foreign Language Classroom Anxiety Scale (FLCAS) demonstrated a moderately unfavorable connection with second language achievement (Sparks & Ganschow, 2007). It suggests that as students' anxiety increases, when they try to avoid the challenges of learning the target language (Salas et al, 2013). Playback theatre is commonly employed with diverse demographics, such as hospital and mental institution patients, at-risk youngsters, and older adults to alleviate the learners' anxiety level (Moran, 2011). PSCAS

F. Objectives of the Study

The objectives of the study are to design playback theatre activities that would improve the anxiety disorders of learners at the undergraduate level and to encourage learners to overcome their barriers in speaking English language confidently through playback theatre activities. The following null hypothesis were formulated based on the above objectives,

H0: There is no significant influence of playback theatre activities in improving anxiety level expressiveness and attentiveness, composure and speech naturalness of the learners

H0: There is no significant difference between the mean scores of the pre-test and post-test scores of the learners who were exposed to the playback Theatre activities.

RESEARCH METHOD

A. Samples and Sampling Method

The participants of the study are from Undergraduate Programme in Vellore district. The participants were at tertiary level. According to Union Government Report, Vellore district is considered sixth educationally backward district. The participants' anxiety level is analyzed using Public Speaking Class Anxiety Scale (PSCAS) with 17 items which was adapted from Yaikhong and Usaha (2012). The sampling method employed in this study is purposive sampling method. The PSCAS questionnaire was circulated to 155 participants during the pre-workshop activity at Auxilium Arts and Science College and from the result of the questionnaire 38 participants who have displayed higher level of anxiety were selected as the samples for the study. The participants were provided an opportunity to participate in the workshop-cum-training programme on Playback Theatre therapy. The programme was titled as "Real Life Theatre". The research method employed in the study is one-group pre-test and post-test. Learners were marked during each phase of activity to test their speaking level and anxiety level. The pre-test and post-test were conducted for 20 marks to analyse the significant improvement level of the learners due to the intervention of the playback theatre activities. The pre and post speaking activity and playback theatre activities were organized, observed and analysed by the researcher. The playback theatre activities were for this study was designed with the guidance of the professional playback theatre trainer from "First Drop theatre". The playback theatre activities like warm up, introducing myself with an adjective, taking someone's place, becoming the object, fluid sculpt, tableau and metaphor was employed as the intervention among the learners. A questionnaire with 16 items was used to analyse the significant improvement in their anxiety level and speaking skill due to the intervention of the playback theatre activities. The instructor begins the session by general warm up. The first warm up activity was to Greet the other participants through the theater forms. In the second warm up activity, the instructor asked the participants to Express their likes and dislikes through theater forms and facial expressions.

In the third activity, the instructor asked the individuals to perform about their favorites. Playback therapy continuous warm up activity were given to the learners as a therapy to overcome the anxiety disorders. Students were given a time to stress out and reduce the anxiety level. Playback theatre therapy allows the learners to speak and reflect on their actions, expressions, fluency. Playback theatre therapy focuses to improve the communication skill among learners with learning disabilities (Munjuluri et al, 2020). The second activity is Introducing Myself with an adjective. The learners were asked to pick an adjective which suits their character and behavior. The learners were asked to perform using an adjective with pitch, tempo, pause, inflection and fluency. The third activity is Taking someone's place. The learners were asked to take the adjacent persons position and the individual was asked to perform the other person's feeling, behavior and emotions using gestures, facial expression and jerky movements. The fourth activity was Becoming the object where the individuals were given a scene and they were asked to perform. For example, imagine yourself a plastic bag which got struck in the branch of the tree in a heavy wind and perform. The learners were expected to perform as like plastic bag. The fifth activity fluid sculpt. Instructor asks a set of questions to the individuals and asks the individuals to perform their responses in the theater form and the instructor asks the learners to sculpt their expression for a few seconds. The sixth activity of the playback theater session was metaphor, where the participants should think about a metaphor for the given situation and enact the performance as a group and individual. Tableau was performed in the successive sessions, where the learners perform a set of personal real-life incidents as a part in groups. However, students' level of anxiety is high during the performance, and it has gradually reduced over the series of activities based on playback theatre techniques. Students displayed fear of the unknown, physical weakness, tiredness, stomach ache, headache during the theater performance activity. The students were full of anxiety and fear. However, over a period of training, students were motivated and trained to perform and express through playback theater techniques like introducing myself with an adjective, taking someone's place, becoming the object, tableau, fluid sculpt and metaphor with the focus on like pitch, tempo, pause, inflection and fluency.

RESULTS AND DISCUSSION

A. Reliability of the Questionnaires

The Reliability of the questionnaire is tested using Cronbach Alpha in SPSS. The reliability of the Public Speaking Class Anxiety Scale is 7.0 for 17 items. The reliability of Playback Theatre Questionnaire is 0.910 for 16 items. The reliability table is displayed below,

Table 1. Cronbach alpha coefficient of the questionnaire

Questionnaire	Items	Cronbach alpha coefficient
Public Speaking Class Anxiety Scale (PSCAS)	17	0.730
Playback Theatre Questionnaire (PTQ)	16	0.910

B. Analysis of Public Speaking Class Anxiety Scale

The PSCAS questionnaire was circulated to 87 participants and from the result of the questionnaire 38 participants who have displayed higher level of anxiety were selected as the samples for the study. 30% of the learners felt that they are less confidence and nervous to speak in front of the audience. Over 45% of the learners felt that they were nervous and confused when speaking in English due to their anxiety level. 25% of the learners affirmed that they are afraid of the audience and nervous when speaking in English which they have prepared in advance. 10% of the learners affirms that they have no fear for speaking in English and feel relaxed to talk in English. More than 50% of the participants felt that they feel embarrassed to talk first in English. 35% of the participants felt that certain parts of their body felt very rigid while they speak English. 47% of the learners' dislike using gestures, body and facial expressions while speaking in English. More than 70% of the learners felt that they feel anxious about speaking English even if they have prepared well.

*C. Analysis of Pre-Questionnair*e

Fear and anxiety were so high among the participants, and self-confidence was very less among the participants. Over 21 participants affirmed that they feel less confidence while speaking in English.

Twenty participants affirmed that they have fear of stealing the time of the audience without appropriate preparation. The participants also have hastiness in speaking.

The responses of the learners in the pre-Questionnaire affirmed that they possess less knowledge in monotony, gestures, short jerky movements, fluency, distinctness, pause and precision.

Table 2. Data on Playback Theatre Questionnaire

S NO	Playback Theatre Questionnaire	N	Mean	Std. Dev	5	4	3	2	1
1	Fear and less self-confidence make me paralysed without words	38	3.68	1.11	11	10	13	2	2
2	Without preparation and previous knowledge of my subject I ought to be ashamed to steal the time of the audience	38	3.34	1.19	6	14	8	6	3
3	I haste to begin	38	3.10	1.42	6	9	7	7	9
4	Change in thought demands a change in voice pitch	38	3.94	0.96	0	1	9	19	9
5	Change of pitch produces emphasis	38	3.89	0.86	0	3	7	19	9
6	Change of tempo lends naturalness to deliver the speech or idea	38	3.84	0.96	1	0	15	10	12
7	Change of tempo prevents monotony	38	3.89	0.97	1	2	8	16	11
8	Pause prepares the mind of the auditor to receive the message	38	3.96	0.90	0	4	6	19	9
9	Pause creates effective suspense	38	3.81	0.92	0	4	8	17	9
10	Pausing after an idea gives it time to penetrate into the audiences' mind	38	3.78	0.81	0	4	5	24	5
11	Inflections lead to efficiency	38	3.89	0.03	0	0	15	12	11
12	Fluency occurs through preparation and knowledge on the subject	38	3.34	0.84	0	2	3	13	20
13	Distinctness and precision of utterance are important in speech	38	3.04	0.89	0	4	2	20	12
14	Monotony in gesture should be avoided	38	3.68	0.98	0	5	11	13	9
15	Facial expression important for effective speech	38	4.44	0.68	0	0	4	13	21
16	Short jerky movements of gesture lead to effective speech	38	4.23	0.78	0	0	8	13	17

D. Analysis of the Playback Theatre Activities Scores

In the first activity is Introducing Myself with an adjective the anxiety level of the participants were 6.87 and the anxiety level of the learners in their successive activities are 5.12, 4.89, and 3.89. However, the anxiety level slowly drops to 3.12 in the activity Metaphor. Facial expressions, Gestures and Body movements play a significant role in improving the overall performance of the learners by improving their involvement and confidence. In the activity Introducing myself with an Adjective the mean scores of facial expressions, gestures were 2.65 and the mean scores of the facial expression, gestures learners in their successive activities are 3.76, 4.87 and 5.98. Nevertheless, facial expression, gestures slowly improve to 5.43 in the activity Metaphor. The mean score of the fluency and pause in the first activity was 4.01 however it has gradually improved to 7.89 which aids in good overall performance.

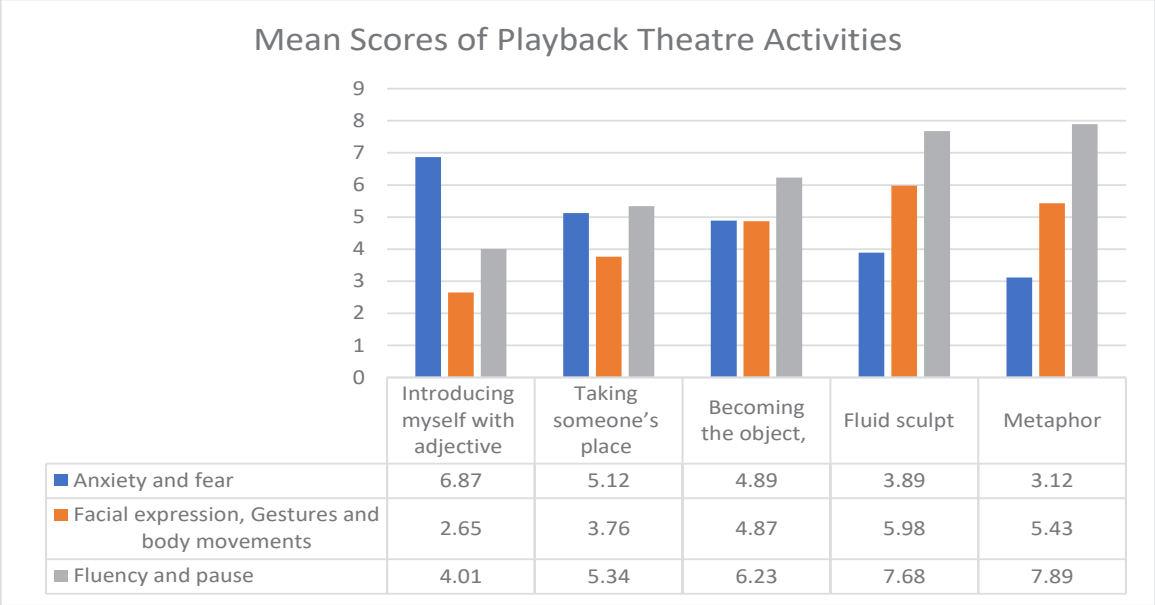

Figure 1: Mean scores of Playback Theatre Activities

E.Analysis of Pre-test and Post-test Scores

Pre-test was conducted for the learners for 20 marks. The participants were asked to present themselves for two minutes using facial expressions, gestures, fluency, pause, tone and body movements. The performance was marked based on the learners' facial expressions, gestures, fluency, and pause. The playback theatre activities like warm up, introducing myself with an adjective, taking someone's place, becoming the object, fluid sculpt and metaphor was employed as the intervention among the learners. The mean value of the pre-test was 10.2632 and the standard deviation was 2.511. The mean value of the post-test was 15.3684 and the standard deviation was 2.259.

Table 3. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre test	10.2632	38	2.51142	.40741
	post test	15.3684	38	2.25917	.36649

In the table 4, it is evident that, there is a significant difference in the mean scores of the pre-test and post-test. The p value of paired sample test is 0.000 which means there is a significant difference. Hence the null hypothesis, there is no significant difference between the mean scores of the pre-test and post-test scores of the learners' speaking performance who were exposed to the playback Theatre activities is rejected and alternate hypothesis is proposed. The alternate hypothesis was there is a significant difference between the mean scores of the pre-test and post-test scores of the learners' speaking performance who were exposed to the playback theatre activities.

Table 4. Paired Samples Test

	Paired Differences							
				95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1 Pre test - post test	-5.10526	3.28625	.53310	-6.18543	-4.02510	-9.577	37	.000

F. Analysis of Post-Questionnaire

Fear and less self-confidence have significantly improved due to the playback theatre activities training among the participants. After the intervention, over 28 participants affirmed that they feel confidence while speaking in English. Twenty - eight participants affirmed that they do not have fear of stealing the time of the audience without appropriate preparation because they are so confident about their English and skill. The participants also do not have hastiness to begin the speech and performance in English language speaking. The responses of the learners in the post-questionnaire concludes that they possess significant level of knowledge and information in monotony, gestures, short jerky movements, fluency, distinctness, pause and precision, which helped them to overcome their anxiety, and fear while speaking in English language. The data in pre-questionnaire and post questionnaire affirms that there is a significant influence of playback theatre activities in improving anxiety level ex pressiveness and attentiveness, composure and speech naturalness of the learners. Due to the playback theatre activities, the learners showed significant improvement in their performance. Hence the null hypothesis there is no significant influence of playback theatre activities in improving anxiety level expressiveness and attentiveness, composure and speech naturalness of the learners is rejected and alternate hypothesis is proposed. The alternate hypothesis was there is a significant influence of playback theatre activities in improving anxiety level expressiveness and attentiveness, composure and speech naturalness of the learners.

Table 5. Playback Theatre Questionnaire

S NO	Playback Theatre Questionnaire	N	Mean	Std. Dev	5	4	3	2	1
1	Fear and less self-confidence make me paralyzed without words	38	2.0	0.83	0	0	13	12	13
2	Without preparation and previous knowledge of my subject I ought to be ashamed to steal the time of the audience	38	1.97	0.67	9	21	8	0	0
3	I haste to begin	38	1.78	0.84	15	16	7	0	0
4	Change in thought demands a change in voice pitch	38	2.00	0.69	9	20	9	0	0
5	Change of pitch produces emphasis	38	1.94	0.65	9	22	7	0	0
6	Change of tempo lends naturalness to deliver the speech or idea	38	2.05	0.86	13	10	15	0	0
7	Change of tempo prevents monotony	38	1.89	0.72	12	18	8	0	0
8	Pause prepares the mind of the auditor to receive the message	38	1.92	0.63	9	23	6	0	0
9	Pause creates effective suspense	38	1.97	0.67	9	21	8	0	0
10	Pausing after an idea gives it time to penetrate into the audiences' mind	38	2.0	0.51	5	28	5	0	0
11	Inflections lead to efficiency	38	2.10	0.83	11	12	15	0	0
12	Fluency occurs through preparation and knowledge on the subject	38	1.55	0.64	20	15	3	0	0
13	Distinctness and precision of utterance are important in speech	38	1.73	0.55	12	24	2	0	0
14	Monotony in gesture should be avoided	38	2.05	0.73	0	0	11	9	18
15	Facial expression important for effective speech	38	1.55	0.68	21	13	4	0	0
16	Short jerky movements of gesture lead to effective speech	38	1.76	0.78	17	13	8	0	0

CONCLUSION

The results proved that learners were hesitant to speak due to anxiety and low self-confidence. Through data interpretation, it is evident that playback theatre was effective in helping the students overcome their anxiety and fear of speaking. In addition, playback theatre was effective in improving linguistic proficiency and confidence. In today's world, the ability to speak English is crucial hence, the study implies that English teachers should incorporate playback theatre into their curriculum. The study concludes that Playback theatre activities have a considerable impact on learners' anxiety level, expressiveness and attentiveness, composure, and speech naturalness. The study is limited to Auxilium Arts and Science College in Vellore district and study can be incorporated in engineering Programme, and among school students. Further research can be carried in rural regions and among the learners with mental retardation.

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APPENDIX A

S NO	Playback Theatre Questionnaire	1	2	3	4	5
1	Fear and less self-confidence make me paralyzed without words					
2	Without preparation and previous knowledge of my subject I ought to be ashamed to steal the time of the audience					
3	I haste to begin					
4	Change in thought demands a change in voice pitch					
5	Change of pitch produces emphasis					
6	Change of tempo lends naturalness to deliver the speech or idea					
7	Change of tempo prevents monotony					
8	Pause prepares the mind of the auditor to receive the message					
9	Pause creates effective suspense					
10	Pausing after an idea gives it time to penetrate into the audiences' mind					
11	Inflections lead to efficiency					
12	Fluency occurs through preparation and knowledge on the subject					
13	Distinctness and precision of utterance are important in speech					
14	Monotony in gesture should be avoided					
15	Facial expression important for effective speech					
16	Short jerky movements of gesture lead to effective speech					

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EFFECT OF ANIMAL-ASSISTED THERAPY ON DEPRESSION, MEMORY, ATTENTION, AND EMOTION REGULATION

Original scientific paper

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ABSTRACT

Introduction: The mere presence of a dog in a therapeutic setup is known to bring about more positive outcomes when incorporated in therapy, dogs can bring about multifarious benefits which are not entirely tapped upon.
Aim: This research aimed to study the effect of animal-assisted therapy (AAT), with therapy dogs, on depressive symptoms, emotional regulation, memory and attention of individuals.
Method: A pretest-posttest quasi-experimental research design was used. Psychology Experiment Building Language (PEBL) for memory and attention, Difficulty in Emotion Regulation Scale (DERS) and Hamilton Depression Rating Scale (HDRS) were used for pre and post-testing 1 week before and post the intervention.
Results: The findings reveal a positive impact of AAT on the given domains of memory, attention, emotion regulation and depressive symptoms, in the experimental group. No significant changes were obtained for the control group.
Discussion: The results help validate the module of AAT to improve an individual's cognitive functioning and alleviate depressive and emotional dysregulations. Further implications are discussed.

Keywords: *animal-assisted therapy, attention, depression, emotion regulation, memory, therapy dog*

INTRODUCTION

An increase in awareness about mental health in India has given rise to a large number of prevalent cases of psychiatric disorders coming to light. India and China, as compared to the rest of the world, were reported to have the highest prevalence of depression (World Health Organization, 2017). Depression has affected over 322 million people all over the world, out of which about half are reported to prevail in South-Eastern Asia and the Western Pacific region (World Health Organization, 2017). A person suffering from major depressive disorder must have five or more of the following symptoms, showing a variation from their previous state of functioning: repeated death-related thoughts, reduction in concentration and thinking ability, guilt feelings, psychomotor deficits, sleep disturbances, loss of weight, and at least one of these symptoms must be depressed mood or loss of interest (American Psychiatric Association, 2013). These clinically significant symptoms that are not caused by other ailments, must last for 2 weeks or more to get diagnosed according to the DSM 5. Depression has a long course and recurrent relapses (Sadock, Sadock, & Ruiz, 2015). This disorder impacts the

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life of the person suffering from it in various ways other than the stated symptoms. The current study will focus on depressive symptoms while the disorder is in the mild stage, along with the strain on cognitive functioning and emotion regulation. Various ailments, including physiological, psychological or neurological are alleviated with the help of animal-assisted therapy. However, an inquiry into this field started only about five decades ago and most of the literature available is grounded in western culture. In the west, multiple benefits of interaction with animals have been found, including improvement in depressive symptoms. In the United Kingdom, for example, a study found that the national health program saved about 600 million pounds as a result of pet ownership (Phillips, 2002).

A. Animal Assisted Therapy

Animal Assisted Therapy (AAT) employs animals as a modality for therapeutic purposes while enabling patients, suffering from acute or chronic disorders, to heal and rehabilitate them. The animal can be included in the therapeutic process for a variety of purposes ranging from diagnosis to treatment. This entails having goal-oriented activities decided before the sessions, in conjunction with the clients. It helps improve a person's emotional and societal skills and mental and physical functioning. It can be used with individuals or groups and in a myriad of settings, including but not limited to nursing homes, hospitals, jails, and many more (Fine, 2015). The animal is chosen based on the nature and type of therapy that will be used for the client and that animal might serve many purposes throughout the process (Nimer & Lundahl, 2007).

B. Human-Animal Bond

Humans have a special bond with animals, as evidenced by the domestication of various species of animals as well as the peaceful cohabitation of humans with animals in today's day and age. The same can be observed from times in memorial, wherein a myriad of pre-historic carvings, scriptures and artwork have portrayed this special bond. In this animal-human bond, the noteworthy one is bonding with dogs. Rightly called a man's best friend, there have been uncountable anecdotes, books, stories, movies and write-ups about the unconditional love they have provided man with. Therapy dogs are innately capable of establishing a much-needed rapport with the clients and help perceive the therapy environment as safe enough to disclose experiences that are very personal to them. The cheerful way in which they greet every client that enters the therapeutic setting seeks the client's attention and provides warmth and affection while easing the tension (Fine, 2006). The bond between the therapy dog and the therapist also portrays how compassionate and benevolent the therapist is and can be, thus making the client more comfortable (Kruger & Serpell, 2010). These dogs act as "social lubricants" or "ice breakers" in a therapeutic setting (Corson et al., 1977; Arkow, 2015). Being one of the largest organizations that work towards animal-assisted therapy, some of the advantages listed by The Delta Society are improved social skills, reduced absenteeism with an increased amount of involvement, the betterment of peer relationships, improved eye contact, tone of voice and communication skills (Why Pet Therapy?, 2018).

C. Neurophysiological Underpinnings of Human-Animal Interactions

When 69 original studies were reviewed, it was found that human and animal interaction has a myriad of benefits, which are deep-rooted in human physiology. These benefits include altering blood pressure (Odendaal, 2000), cortisol levels as well as heart rate to help reduce stress. It also helped with cardiovascular diseases, and mental and physical health (Beetz, Uvnäs-Moberg, Julius, & Kotrschal, 2012). Through these studies, it is also evidenced that this human-animal interaction improves trust, empathy, social skills, attention, interpersonal relationships, and affect. It decreases stress-related neurotransmitters epinephrine and norepinephrine (Beetz, Uvnäs-Moberg, Julius, & Kotrschal, 2012). It also helps to lessen aggression and enhance learning. The most important finding indicated the activation of the oxytocin system due to human-animal interaction (Odendaal & Meintjes, 2003). It also helps to manage pain and perceived pain through a reduction in catecholamine and an increment in levels of endorphins (Marcus, 2013; Odendaal & Meintjes, 2003), β-phenylethylamine, prolactin and dopamine (Odendaal & Meintjes, 2003). This further impacts depressive symptoms. As given by the scores on Beck Depression Inventory, which were found to reduce after implementing animal-assisted therapy (Folse, Minder, Aycock, & Santana, 1994; Berget, Ekeberg, Pedersen, & Braastad, 2011). Speech, communication and vocabulary improvement, and cognitive development are known to take place with the therapy animal as a catalyst (Poresky, 2015). Through therapy, clients can be taught self-control as animals cannot be manipulated or bullied easily, it requires a certain

amount of time and works to gain the animal's trust so that it follows commands. It also provides them with a sense of empowerment when these commands are followed and teaches them assertiveness (McIntosh, 2002). Clients with abusive tendencies often gain from positive interactions with animals and observe the kindness and compassion shown by them, thus acting as role models (Nebbe, 1994). It helps to reduce their anger, abusive behaviours, and manipulation, increasing their cooperation, positivity and finding appropriate outlets for venting (Anderson & Urichuk, 2008). AAT, by the modest action of patting the animal or touching it, has proven to lessen anxiety and is extremely effective with anxiety spectrum disorders (Mason & Hagan, 1999). In depressive disorders, it helps to elevate mood and affect, improves the perception of self-control while reducing effects of learned helplessness, alleviates feelings of isolation, boredom and worthlessness, helps to address loss or guilt and lessens risky and suicidal behaviours. It also helps induce positive attitude and mood, reality testing, assertion, attention, decision making, social activity, interest, concentration, memory, reality orientation and reduce self-talk and improves sleep and appetite (Anderson & Urichuk, 2008). Animals are often used for generating stories and metaphors, observational learning can take place too as the clients learn by modelling the desired behaviours (Fine, 2015). When bonding takes place between the client and the animal, an increase in the neuroendocrine chemicals responsible for their affection and an elevated mood is found (Odendaal, 2000).

D. Animals as a Catalyst for Emotions

Person-centred theory suggests three main conditions that have to be met by the therapist and all three are fulfilled by a therapy dog, namely, genuineness, unconditional positive regard and empathy (McIntosh, 2002). When clients suffer from the inability to express their emotions suitably or have been suppressing them or have been made to believe that their emotions are not important, they may face inappropriate guilt and stress. Therapy animals then provide them with a haven to emote, to feel a variety of emotions (Cousins, 1989) and to experience behaviours like touching, in a suitable way which are shunned from our daily interactions (Fine, 2015; Thompson et al., 2014). They are also known to be "emotional regulators" in therapeutic settings (Fine, 2015). Thus, they can help improve verbal and non-verbal communication and learn about their own and others' emotions along with the appropriate way to emote (Anderson & Urichuk, 2008). In AAT, the animals help the clients understand empathy, in ways that are more practical and not easily accomplished by other human interactions (Nebbe, 1994). It helps to improve their patience and understanding. With the unconditional positive regard provided by animals along with their non-judgmental and non-discriminatory nature, they help to build the client's self-esteem, and self-confidence and provide them with a sense of purpose (Jorgenson Jennifer, 2007). Through various experiences in life, many clients may develop difficulty in trusting others or getting attached. These attachment difficulties have also been explored through AAT wherein, clients found it easy to trust an animal and have been known to disclose their troubles to them (Covert, Whiren, Keith, & Nelson, 1985). Dogs are known for their unconditional love and for being completely non-judgmental. Animals can be used to establish a therapeutic relationship between the client and the therapist as they act as an adjunct (Mallon, 1994). Therapy dogs can facilitate positive communication and interactions with others, bonding with them, learning about personal space and suitable physical touch, increasing nurturance, and trust and providing a distraction from distress.

E. Research Objective

The main objective of this research is to study the role of animal-assisted therapy incorporating therapy dogs, on the improvement of emotion regulation, memory, attention and depressive symptoms.

F. Rationale and Significance

In India there has been a rampant increase in the rate of depression which is twice as prevalent in the urban population, affecting between 1.7 to 74 people per thousand. It is also predicted that if the current trend continues at the same pace, by the year 2020 depression will be the second-highest cause of disability-adjusted life years (DALYs). The World Health Organization reports have evidenced that nearly 56 million people in India are affected by depression. About one in twenty Indians suffer from depression (Grover, Dutt, & Avasthi, 2010). It has been found that the mere presence of an animal in a therapeutic setting has proven to be beneficial for patients (Anderson & Urichuk, 2008), so the therapeutic effects of these animals, if worked on effectively can be multifarious. The multiple benefits of AAT include improved emotion regulation, self and cognitive development, attachment, motivation, reduced anxiety, depressive symptoms, isolation and guilt feelings will prove to be greatly advantageous to patients with depression. However, a large

majority of the studies available on AAT have been conducted in the west, there are negligible studies concerning the effects of AAT in an Indian context. Given the vast disparity in their outlooks towards animals, specifically dogs, in various cultural communities, the studies performed in the west are not directly applicable and their interventions cannot be directly implemented. Research including an Indian population is negligible, and this indicates the need for the current study given the sharp rise in depression. Although dogs are the most commonly kept pet (Gray & Young, 2011), and some cross-cultural differences in attitudes toward dogs exist (Knobel, Laurenson, Kazwala & Cleaveland, 2008; Miura, Bradshaw, & Tanida, 2000), no research has examined whether animal-assisted therapy that employs dogs is differentially effective in the eastern cultures. Moreover, most of the literature available on AAT is anecdotal or involves basic animal-human interaction instead of therapy. This is a relatively new field of inquiry wherein the exploration in this field started in the late 1960s. It was also found that the few experimental studies published lacked a significant sample size which further limited its statistical power and application to the general population. Thus, a dire need for scientific studies is present in the dearth of appropriate literature concerning AAT (Anderson & Urichuk, 2008). The present study will help to establish the effectiveness of AAT in regulating emotions, depressive symptoms, memory and attention.

METHOD

A. Sample

The sample consisted of 30 participants with mild to moderate depression within the age group of 20-30 years. Purposive sampling technique was used to select the participants that match the criteria. The inclusion criteria for this study were consenting individuals within the age group of 20-30 years, who can read, write and speak English and have a score between 8-18 points on the Hamilton Depression Rating Scale. The exclusion criteria were individuals with a history of psychiatric, neurological or neurosurgical conditions and any other co-morbidity, with a score higher than 19 points on the Hamilton Depression Rating Scale, an allergy to dogs and/or individuals with pets.

B. Instruments

Hamilton Depression Rating Scale (HDRS) assesses the severity of symptoms over time with a set of 21 symptoms that the participant has to rate on a scale from 1 to 4 or 1 to 2 based on a 2-item or 4-item symptom questions. This scale is generally given pre and post-intervention to select the study population and observe the changes over time. Scores from 0-7 are defined as normal, from 8 to 13 as mild depression, from 14 to 18 as moderate, from 19 to 22 as severe, and above 23 patients will be diagnosed with very severe depression (Hamilton, 1960). Difficulties in Emotion Regulation Scale (DERS) is a 36-item scale on which the participants rate themselves on a 5-point scale, from almost never to almost always. Some items are reverse scored and a sum of the score on all statements gives the total score, where a high score indicates greater problems with emotion regulation (Gratz & Roemer, 2004). Psychology Experiment Building Language (PEBL) includes a battery of tests to measure the cognitive functioning of individuals. The tests used in this study included a free recall test, a four-choice test and CORSI to gauge memory and attention (PEBL Psychological Test Battery, 2019).

C. Research Design

A pretest-posttest quasi-experimental research design was used. The participants were matched based on age, gender, educational qualification and HDRS scores and assigned to experimental and control groups. Both groups underwent pretesting, to gauge the severity of symptoms 1 week before the intervention and then a posttest 1 week after the intervention.

D. Procedure

Participants were selected according to availability and stated criteria. They were matched based on age, gender and educational qualification, and HDRS scores and divided into experimental and control groups. Informed consent was obtained, introduction to the study and procedure was given. The participants were pretested in relatively uniform conditions. HDRS, selected tests on PEBL and DERS were administered. The control group was engaged in activities, like playing games and structured conversations, for 45 minutes once a week over three months. The experimental group was engaged in animal-assisted therapy for the same duration. The therapeutic procedure involved various goal-directed activities performed by an animal-assisted therapist and mediated by a therapy dog. Some of the activities involved include stroking the dog, teaching it tricks, effectively commanding it, playing, grooming, talking, remembering about the dog and making use of the therapy dog either directly through tasks or as a metaphor to achieve goals. A total of 12 sessions were held over the span of three months. One week after the intervention

period, all the participants underwent post-testing under relatively standardised conditions. All participants were debriefed about the experiment and their questions were addressed. At the end of the study, the waitlisted control group was offered animal-assisted therapy and provided a list of alternatives if they chose to not participate.

E. Ethical Considerations

Ethical clearance was obtained from the Department of Psychology, Christ University, Bangalore, India prior to conduction of the study. Participant protection. Detailed informed consent was provided to the participants and only those willingly participating were selected. The freedom to withdraw from the study at any point in time was communicated clearly. The participants were safeguarded from any mishaps with the therapy dog. If they were uncomfortable with the dog or if indicated by the therapist, the session would be terminated to protect the participant, however, such a situation did not arise in the study. All required safety measures were taken, like keeping a list of doctors ready for any emergencies. No physical or psychological harm was intended to the participants. A debriefing session was provided at the end of the study. Animal protection. The therapy dog was protected from being roughly handled by guiding the participants in the right way to handle the dog. All hazardous materials were cleared from the therapy site, overfeeding of treats was forbidden and the safety of the dog was ensured. As heat can affect the temperament of the dog, measures were taken to make sure the therapy does not take place if a very hot environment. It was protected from any form of danger and abuse and was given frequent breaks so that it can resume normal behaviour. Medical attention would be given if the dog was ill, injured or stressed, based on the judgment of the dog handler, however, such a situation did not arise in the study.Scientific integrity. None of the data was fabricated, and proper authorship and credit were given where it is due. The experiment was conducted ethically following the guidelines that are given by APA for conducting such experiments. All the data collected has been kept confidential.

RESULTS

Animal-assisted therapy has been clinically employed to manage and treat various psychological, social and psychiatric ailments. Not many studies have been conducted to explore its role in improving depressive symptoms, memory and emotion regulation. This study was conducted to measure the difference in memory, attention, emotion regulation and depressive symptoms before and after animal-assisted therapy incorporating a therapy dog. The experimental group had 3 dropouts and the control group had 4. The participants were considered a dropout if they missed more than one intervention session. The reasons for missing the sessions included the inability to travel to the intervention venue, ill health or other commitments. The dropped-out participants have been excluded from the analysis. In the experimental group, the Shapiro-Wilk test for normality was conducted for all the domains. The scores for attention, emotion regulation, working memory, and spatial working memory span were normally distributed as shown in Table 1. For depressive symptoms, the post-test scores and for spatial working memory block span, both pre and post-test scores were skewed.

Table 1. Experimental Group Shapiro Wilk Test of Normality

Domain	Statistic	df	Sig.
Post_Attention	.959	11	.757
Post_Depressive Symptom	.823	11	.019
Post_Spatial Working Memory (Block Span)	.803	11	.010
Pre_Emotion Regulation	.914	11	.272
Pre_Depressive Symptom	.906	11	.219
Pre_ Spatial Working Memory (Memory Span)	.851	11	.053
Pre_Working Memory (accuracy)	.911	11	.254
Pre_Working Memory (response time)	.920	11	.315
Pre_Attention	.936	11	.473
Post_Emotion Regulation	.948	11	.623
Post_ Spatial Working Memory (Memory Span)	.905	11	.212
Post_Working Memory (accuracy)	.918	11	.303
Post_Working Memory (response time)	.894	11	.157
Pre_ Spatial Working Memory (Block Span)	.850	11	.043

Paired sample t-tests were carried out for the normally distributed domains of the experimental group, as seen in Table 2. All the mean differences reported below are posttest – pretest scores of the participants. The emotion regulation had improved post-intervention, seen by a drop in the mean score. A higher score on the DERS denotes higher issues with emotion regulation. There was a mean difference of -14.083 significant at .000. The spatial working memory (memory span) had improved with a higher post-intervention score, with a mean difference of 1.375 significant at .000. For working memory (based on the accuracy of responses), improvement with a mean difference of .12 was found after the intervention, significant at .000. Based on the response time, an improvement with the mean difference of -2.20, significant at .006 was observed post-intervention. The attention scores improved as well. A mean difference of -0.67, significant at .004 is reported. A lower posttest score indicates an improvement, as the lower the score, the higher the attention.

Table 2. Experimental Group Paired Sample t-test

Domain	Mean	Std. Deviation	t	df	Sig. (2-tailed)
Post_Emotion Regulation - Pre_ Emotion Regulation	-14.083	5.089	9.586	11	.000
Post_Spatial Working Memory (Memory Span) - Pre_Spatial Working Memory (Memory Span)	1.3750	.5276	9.027	11	.000
Post_Working Memory (accuracy) - Pre_Working Memory (accuracy)	.12000	.08485	4.899	11	.000
Post_Working Memory (response time) - Pre_Working Memory (response time)	-2.20083	2.22319	3.429	11	.006
Post_Attention – Pre_Attention	-.06731	.06321	3.689	11	.004

Wilcoxon signed-rank test was carried out for depressive symptoms and spatial working memory (block span) as seen in Table 3. There was a significant difference between the pre and post-conditions for depressive symptoms and spatial working memory (block span), significant at .002 for both. A lower mean score for depressive symptoms indicates a reduction in symptoms, and a higher mean score for spatial working memory indicates an improvement. These results indicate that AAT improved emotion regulation, memory and attention and reduces depressive symptoms.

Table 3. Experimental Group Wilcoxon Signed Rank Test

Null Hypothesis	Sig.	Decision
The median of difference between Post_Depressive Symptoms and Pre_Depressive Symptoms equals 0	.002	Reject the null hypothesis
The median of difference between Post_Spatial Working Memory (Block Span) and Pre_ Spatial Working Memory (Block Span) equals 0	.002	Reject the null hypothesis

For the control group as well, the Shapiro-Wilk test of normality was carried out for all the scores, pre and post-intervention. Data from all the domains were normally distributed except for posttest scores of spatial working memory (block span) as seen in Table 4.

Table 4. Control Group Shapiro Wilk Test for Normality

Domain	Statistic	df	Sig.
Pre_Emotion Regulation	.928	11	.391
Pre_Depressive Symptom	.883	11	.114
Pre_Spatial Working Memory (Block Span)	.866	11	.069
Pre_ Spatial Working Memory (Memory Span)	.902	11	.194
Pre_Working Memory (accuracy)	.930	11	.414
Pre_WorkingMemory (response time)	.949	11	.629
Pre_Attention	.940	11	.518
Post_Emotion Regulation	.976	11	.939
Post_Depressive Symptom	.964	11	.824
Post_ Spatial Working Memory (Block Span)	.689	11	.000
Post_ Spatial Working Memory (Memory Span)	.885	11	.119
Post_Working Memory (accuracy)	.858	11	.055
Post_Working Memory (response time)	.935	11	.462
Post_Attention	.949	11	.637

Paired sample t-test was carried out for the normally distributed domains as seen in Table 5. There were no significant differences found between the pre and post-test scores, despite a mean difference (MD) on all domains except spatial working memory (memory span) where the MD was .636 (p=.035), indicating a significant improvement. For emotion regulation, the MD was .273 (p=.821), for depressive symptoms the MD was .273 (p=.706), for working memory based on accuracy the MD is .016 (p=.457), based on response time the MD was .425 (p=.299) and for the scores of attention the MD was -.003 (.941).

Table 5. Control Group Paired Sample t-test

Domain	Mean	Std. Deviation	t	df	Sig.
Post_Emotion Regulation - Pre_Emotion Regulation	.273	3.901	.232	10	.821
Post_Depressive Symptom - Pre_Depressive Symptom	.273	2.328	.389	10	.706
Post_Spatial Working Memory (Memory Span) - Pre_ Spatial Working Memory (Memory Span)	.6364	.8686	2.430	10	.035
Post_Working Memory (accuracy) - Pre_Working Memory (accuracy)	.01636	.07018	.773	10	.457
Post_Working Memory (response time) - Pre_Working Memory (response time)	.42455	1.28528	1.096	10	.299
Post_Attention - Pre_Attention	-.00273	.11967	.076	10	.941

Wilcoxon signed-rank test was conducted for the spatial working memory as seen in Table 6. There was no significant difference between the pre and post-intervention scores and the null hypothesis was retained (p=.317). Thus, indicates that even though slight improvements were seen in the control group, the changes were not significant, whereas the intervention with the therapy dog was more effective.

Table 6. Control group Wilcoxon Signed Rank Test

Null Hypothesis	Sig.	Decision
The median of difference between Post_ Spatial Working Memory (Block Span) and Pre_ Spatial Working Memory (Block Span) equals 0	.317	Retain the null hypothesis

DISCUSSION

Structured interventions with therapy dogs have been shown to bring about positive outcomes and improvements in individuals who participate. Very few Indian studies have incorporated an intervention targeted towards improving memory, attention, emotion regulation and alleviating depressive symptoms. This research has shown a positive outcome and attempts to set the ground for many such studies in the future.

A. Animal-Assisted Therapy and Depressive Symptoms

Depressed individuals suffer from loss of concentration, forgetfulness and impaired thinking. They have a lowered volume and rate of speech and disordered thought including thought blocking and poverty of content (Sadock, Sadock, & Ruiz, 2015). The decision-making skills (Tracy, 2018), executive function, attention and memory are found to be affected in patients suffering from depression (Dalal & Sivakumar, 2010). Structured interactions and activities with therapy dogs have been found to reduce depressive symptoms while inducing positive emotions. This has been found in studies done in psychiatric hospitals as well as nursing homes (Souter & Miller, 2007). Over time the participants form an encouraging and optimistic perception of the dog they have been interacting with, which further helps them to bond and reduce loneliness, sadness and depression (O'Haire et al., 2015). As observed in the current study these participants further engage more with other participants, giving them opportunities for and experience positive interactions (Wood et al., 2005). Conversations with an increased amount of smiling and laughter are also observed (O'Haire, 2013) as the participants bond further and start to observe the eccentricities of the dog indulging in fun activities with the others. At a physiological level, endorphins are released when a participant touches and physically interacts with a therapy dog. This enables a reduction in feelings of loneliness, depressive symptoms and pain (Mims & Waddell, 2016). Positive physical contact, one where both the participant and the dog desire interaction further releases oxytocin in both of them. This helps them feel bonded, gives them a feeling of being loved and builds trust. It also helps them relax and reduces their stress which enables better use of their social skills (Odendaal & Meintjes, 2003). A reduction in cortisol levels takes place when participants are enjoying their interactions with the dog and other participants. This leads to reduced stress, better handling of stressful situations (Shin, 2006), lowers anxiety, creates better rapport and enhances social relationships (Bleiberg et al., 2005).

B. Animal-Assisted Therapy for Memory, Attention and Emotion Regulation

The participants that underwent the animal-assisted intervention showed improvements in their memory, attention and emotion regulation after the intervention period. Participating in AAT and engaging with the therapy dog, reduces levels of cortisol in the body. This can aid memory, learning, and decision-making in individuals (Shin, 2006) and overall improvement in cognitive functioning too (Thompson et al., 2014). It reduces the negative impact of cortisol on memory functioning and the creation of cognitive disturbances (Brunner et al., 2006). Processing emotions becomes easier and further reduces depressive symptoms, it also provides long-term benefits (Hunt & Chizkov, 2014). Regulation of the heart rate, blood pressure, focus, attention, memory storage and attention takes place through changes in the levels of norepinephrine (O'Donnell et al., 2012) that take place during the intervention. Skin is the largest organ of our body and while physically interacting with the therapy dogs, a neurotransmitter that is impacted greatly is oxytocin. It is released in both humans and animals alike (Miller et al., 2009). This enhances empathy, emotional health self-perception, and social skills, lowers depression and improves memory and attachment formation (Cardoso et al., 2012; Jonas et al., 2008). Furthermore, it reduces stress and aggression while promoting bonding (Beetz et al., 2012). Animals help individuals feel safe and provide a sense of companionship. Structured interactions with them help develop emotional and cognitive skills, especially in

the face of traumatic events (Myers, 2006). On a concluding note, depression is on the rise in India and surrounding countries. It is predicted to pose a heavy social and financial burden on families with suffering individuals as well as the Indian economy. As this study shows, the challenges faced due to depression can be addressed through animal-assisted therapy sessions. These sessions, when provided at an early stage of mild depression may help alleviate depressive symptoms and improve the cognitive functioning and emotion regulation of the individuals. However, studying the same in an Indian context is important to gauge the impact of AAT with individuals having varying outlooks towards dogs, that differ from western cultures.

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FEEDBACK TECHNIQUES – IMPACT ON COMMUNICATION

Original scientific paper

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ABSTRACT

Giving and receiving information about employee performance is something that happens every day within an organization. This process of assessment has a clear goal: to clarify the level of performance the employees have to achieve and the steps they have to undertake to achieve the performance standards. In a normal business environment and a positive organizational culture, they both share their views and perceptions without any barriers and try to do that positively, not threatening, irritating, or judging each on their views. Our article analyses the use of the sandwich feedback technique in public administration as one of the sectors where organizational culture and climate differ from those of the business environment and where the spread of messages is more complicated. Connected to this, we analysed if this technique is the most appropriate technique for communicators who want to transform the business environment and culture.

***Keywords**: Employee, performance, feedback technique, interpersonal relation, performance standards*

INTRODUCTION

Leaders are asked to have a strategy when working with others. As part of this strategy and their duties, they have to appraise the performance of the staff members or deliver messages about their performance. The messages they deliver as part of their assessment can be both positive and negative. They often face situations where they have to deliver negative feedback. However, how can leaders share negative messages on employee performance and use them as motivation for transforming the public administration's services for the citizens and improving the performance standards the employees have to achieve? How can transformative leaders spread these messages to the employees and simultaneously motivate them to give a better performance? If the goal is to improve employees' skills and abilities to achieve the established organizational performance standards, then the messages have to be delivered positively while developing a bilateral communication process that stimulates the positive responses of employees and makes possible mutual conversation on how to avoid mistakes and achieve a higher level of performance. The question is how to spread these messages creatively, that is in a manner that will build confidence and take into consideration the emotional response, personality, and integrity of the workers and, at the same time, make them take the messages seriously and think positively

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about how they can improve their performance and achieve the required performance standards. The sandwich feedback method has been viewed as an appropriate method, though not by all scholars, for creatively delivering negative messages and bringing the manager and employee into a communication space that can produce a higher level of confidence and open dialogue on values and standards the employees have to achieve. However, if continued over time, the reaction to supervisory-initiated positive reinforcement soon becomes "What have I done wrong now?" and workers become anxious waiting for something bad to inevitably happen since the positive comment has become a precursor to criticism (Bergen, Bressler and Campbell, 2014). As employees receive messages about their performance, some of which might be negative, this makes things more complicated. Delivering negative messages is a difficult process not only because it affects the leaders and employees but also because it might cause different reactions and initiate rumours or protests inside the organization. That is why, as research has shown, managers feel uncomfortable about delivering negative feedback (Moss, Sanchez, and Heisler, 2004), and employees receiving them are affected in a negative way (Sigvardsson and Marthouret, 2016). Both sides would like to avoid situations in which they would be obliged to deliver or receive such messages. However, if sharing criticism is inevitable, is there any possibility for leaders to share criticism in a supportive way and help organizations become more citizen-oriented and stimulate employees to achieve better levels of performance?

Material And Methods

The very first dimension that our article takes into consideration is what happens in public administration when it comes to feedback messages and how the top-level management of the state administration in Kosovo delivers them to the employees. For this purpose, we first analysed the status of the feedback technique within the state administration: Was this the most often-used technique that public administration managers used to deliver negative performance feedback and to receive feedback from the employees? Concerning this, the article analyses the impact the use of this technique has on the interpersonal relations between managers and civil servants. The crucial point is to observe whether public administration managers believe that by using this technique, the staff will be motivated to generate a positive response, or that they use this and other techniques to create psychological pressure, avoiding the fact that this procedure is a complex interpersonal interaction and can harm subsequent performance.

The second dimension is to assess the connection between feedback techniques, specifically "the sandwich", and the leader's communication style and behaviours. The aim is to examine if the sandwich technique can be used "uniformly" in all situations and by all leaders, or if it differs according to a manager's style and communication profile.

The third dimension of our study is the correlation of negative feedback with positive ones in public administration. The aim is to analyse whether sharing criticism with positive messages can impact the perception of public servants about leadership values and if it helps them to create a strong correlation between a positive response and better performance or if it destroys employees' positive perceptions of the common values of the organization and further damages their relationships within the organization.

Finally, as the fourth dimension, the article discusses the use of this technique in specific business environments (Kosovo), where the leadership is still facing two big challenges: the transformation of the economic system from a state-controlled to a free economic market and the transformation of the leadership from servant leadership to transformative or transactional leadership.

Research Questions

To analyse the use of the sandwich feedback technique in public administration and its impact of it on employees' performance and achievement of the performance standards, we organized our research into three main research questions: Is the sandwich feedback technique an efficient instrument for delivering negative messages to employees, not frustrating them, and pushing them to achieve a better performance standard? Is this technique connected to the leaders' communication styles?

Conversely, can this technique be used only by managers who are more worker-oriented or even by those who are upward vertical communicators? Is there any difference between using this technique in business and public administration?

Hypothesis

To answer the research questions, we have underlined two main hypotheses:

H1. Applying the sandwich feedback technique can improve employees' skills and abilities to achieve the established organizational performance standards if the following criteria are met: The feedback messages are delivered positively and creatively. The feedback builds confidence and stimulates a positive response from the employee. The manager takes into consideration the emotional response, personality, and integrity of the workers and makes it possible for a mutual conversation to occur on how to avoid mistakes and how to achieve a higher level of performance.

H2. Applying the sandwich feedback technique in public administration has a strong impact on the interpersonal and intercultural relations between the managers and civil servants when the following criteria are met: The managers and staff agree that the sandwich feedback technique is a complex interpersonal interaction and are ready to engage in discussions in a positive manner. The employees accept the technique of delivering negative messages together with positive ones and accept the impact of it on their self-evaluation process. The employees agree that the sandwich feedback technique is a process for achieving some objectives and goals, such as standards of performance. They accept that this technique is a more balanced technique, which makes them feel more comfortable and gives them less anxiety; it is known that the sandwich feedback technique might be very problematic with transformational leaders, whose approaches are empathetically determined.

METHOD

Concerning the abovementioned aims and knowing that the sandwich feedback method is a very complex interpersonal interaction that can have a negative impact on subsequent performances, the researcher had to take into consideration that the interpersonal relations, communications styles of the top managers and techniques used by them to ensure that their subordinates generate positive feedback are decisive for the success of this technique. To analyse these dimensions, the direct observation of the researcher in the place was important. That's why we developed a combined research method. First, a structured questionnaire was designed and sent to all top-level managers of state institutions (national assembly, state government, ministries, national agencies and other institutions). As it was not our intention to prove feedback theories or analyse the feedback techniques used by employees, we concentrated on the techniques used by managers to deliver negative messages together with positive ones and their impact on employees' self-evaluation. Semi-structured interviews were also conducted with some selected top-level managers as a tool for analyzing the complexity of the process and further analysing the chosen method of delivering messages and getting feedback. The managers were selected based on their past performance-evaluation process and represented the gender distribution of the top-level managers in-state public administration.

Techniques of Sharing Negative Messages in a Supportive Way

A feedback technique, according to Webster's dictionary, is a way of giving information to someone to improve their performance. The way leaders choose to communicate negative feedback to employees is very important, as it affects their interpretation of and response to the feedback (Harms and Roebuck, 2010). For this reason, every research on the effects of using this technique has to take into consideration the fact that the conversation between the manager and employee includes interpersonal relations (Jug, Jiang, and Bean, 2018) and is majorly dependent on the manager's communication skills and behaviours. According to (Parkes, Abercrombie and McCarty, 2013) the feedback sandwich positively impacts performance, and in an ideal world, a subordinate would accept corrective feedback with an open mind (Manzoni, 2002). When we talk about the techniques of sharing criticism or negative messages, we also talk about the performance assessment process and the ways leaders choose to provide information to employees about their performance. To do this, they take into account some values and goals. The values they have in mind usually are the standards of performance to be achieved, which might serve as a key framework for evaluating a person's behaviour and achievements. The goal might be different, but all of them focus on improving employee performance by minimizing the gap between the organizational values or performance standards and the individual performance of the employees, because the performance appraisal of managers is one of the most complex and controversial human resources technique (Roberts, 2002). Therefore, the way leaders choose to connect negative messages with positive

ones or use a transparent strategy and speak directly to their staff is a matter of managerial perception. Usually, they use this technique being convinced that it is a more balanced technique and makes the employees feel more comfortable and gives them less anxiety (Schwarz, 2013). However, this is not the only factor that must be taken into consideration. Organizational culture is different in different nations and countries, and there are cultural differences across organizations owned and managed by individuals of different nationalities (Bhaskaran and Sukumaran, 2007). The common values in which the majority of the people believe and the ways by which these values are shared and communicated are often dependent on the level of interpersonal relations and intercommunication between the leaders and the staff. In optimistic societies, it is well accepted if you package criticism with a positive approach and messages. The organizational culture may impose a positive approach, and the culture's strength and balance will have direct positive effects on effectiveness (Panagiotis and Panagiotis, 2016). However, this is not always the case in European societies. In these societies (including the traditional organizational culture and climate), leaders usually build a very strong communication personality, and they prefer to use a direct style to communicate their perceptions, even if they have to deliver negative perceptions. By communicating and promoting the organizational vision to their subordinates and by getting their acknowledgment of the vision, it is possible to influence their work behaviour and attitudes (Tsai, 2011). In the Balkans, this relationship is much more complicated due to historical and cultural perceptions. Therefore, an organization's culture imposes a kind of interpersonal relationship that has to be taken into consideration. The others might be more empathetic and may have cultivated more interpersonal relations with the staff. As (Bass, 1985) have underlined, managers with transformational characteristics and behaviour, such as individual consideration, intellectual stimulation, inspirational motivation and idealized influence, are more predisposed to create a positive climate and deliver messages more positively, by taking into consideration employees' characteristics and behaviour, soliciting followers' concerns and ideas, and inspiring, influencing and motivating employees to achieve higher performance standards.

The third important factor is the business environment, organizational climate, and business circumstances. Organizational culture and climate might influence the technique used by the leaders, but the way by which they communicate their feedback is a matter of the personal communication style and techniques that leaders have eveloped through the years. Rarely are these premises in contrast with each other. The perceptions of the leaders about the role and place of a specific technique to motivate employees are very important, as negative feedback is not always effective in generating improvements in employee performance (Brown and Kulik, 2016).

Table 1.The sandwich feedback a three-step process of sharing criticism in a supportive way

Three Steps	Guidelines	Example
Step One Appreciate the person	Share a statement of recognition for some quality, ability, or talent this person brings to the group that is *valuable*. When the person's value is secure, he or she is less likely to be defensive. This recognition must be sincere, or it will not have value. Define the "strength that is over done", what is the sincere compliment you can give a strength the person possesses that when overdone becomes the weakness you want changed.	I really am grateful that you are so open and direct with me. I trust that you are not going to hide things, so we can talk them out.
Step Two Challenge the Behavior	• Describe the behavior you want to have changed. • State how it is not supportive to you and to the relationship between you. • Challenge the behavior, do not pass judgment on the person. • Use the Five Levels to be precise and complete.	Facts: When you start to talk while I am still talking, Thoughts: I think you are not listening to what I am saying, Emotions: and I feel frustrated. Importance This is important to me because I respect that, as my supervisor you are the one who makes the decision. I have information you really need for making the best decision. Action/Expectation: I want to find a way that we can each be heard, without "fighting for air time."
Step Three Support Constructive Change	• Ask what you can do to give ongoing support to help make this change. • Ask what they would like you to do to remind them if you notice the old behavior reoccurring. • Get the person to identify a specific behavior, word, or phrase you can use, which they agree will be supportive.	What could I do that would remind you if I ever notice this happening again?

The leaders have to take into consideration more than one factor and, consequently, using only one technique for appraisals is not without problems today ('Performance Appraisal Systems', n.d.). When they talk to others, they want to get information back. Therefore, they will use the best strategy available to be assured that their employees will respond properly and will deliver feedback on their negative messages, which is not a very simple feat. Good leaders take care to not undermine an employee's feedback. They should be sure that employing the sandwich feedback technique will be appropriate as per the expectations of the subordinates. Usually, employees resist changes that managers might require of them and like to continue with the same behaviours and work attitudes, though their managers might require them to push themselves to achieve another level of performance. According to (Ringold, 2002), one of the most important reasons might be that people do not want to be influenced; they are motivated to resist persuasion. Thus, delivering negative messages but positively, not following your intent, can frustrate them. There are a lot of employees who don't want to get positive and negative messages packed together using the sandwich technique, as they consider this as a game for the leaders to say bad things while concealing them

behind positive messages. They like to directly get to the negative messages so that they can prepare and demonstrate an effective feedback strategy.

The Obstacles to Being "a Perfect Technique"

As mentioned, the sandwich feedback method is a very complex process, as it includes descriptive information regarding employees' performance and has a clear intention: to improve the future performance of the employees, making them understand the gaps and failures of achieving performance standards. That makes the process very complex and creates permanent pressure on managers as well as employees. Leaders should be sure that by using this technique, the employees will be motivated to generate positive responses to achieve better performance standards and not the opposite that is misinterpreting their messages or further increasing the psychological pressure on employees. One thing is clear, the tactics that managers use to deliver negative feedback to their subordinates are still not very clear (Brown and Kulik, 2016), and they have to find a way to deliver these messages and, at the same time, get positive feedback from the employees in the existing organizational culture and climate. This includes all the factors mentioned in Part 3 of the article. However, that pushes into a crisis the sandwich technique as well, as the results are often dependent on the personality of the employee and the manager, the interpersonal relations they have, the climate and culture, as well as on the communication style of both parties. That's why some scholars are not in favour of using this technique always for delivering messages (Wood, 2013). For some other scholars, this technique may undermine the relationship between the managers and staff. (Schwarz, 2013) has listed some reasons why the "sandwich approach" doesn't work and must be avoided. According to the abovementioned scholars, this technique increases anxiety among the staff during the feedback process. As this process requires a strong personal relationship, it is feared that giving positive messages before sharing negative ones could give the staff the perception that you are trying to package negative performance comments with positive ones and just postponing the "criticism". They would rather accept direct negative messages instead of receiving them just after a "good word". This might be a problem for transformational leaders, whose approach is empathetically determined. They usually work transparently and have close relations with others. Trying to "package" the feedback between the two relaxing and encouraging parts of the sandwich might create, on the part of the leader, a perception of insincerity, lack of transparency, and a non-empathetic relationship with the staff. Therefore, a lot of people would prefer to get direct and transparent feedback, instead of a packed one in a "sandwich".

RESULTS

In public administration, specifically in Kosovo, the key role in delivering the performance assessment belongs to the first administrative leader, which can be the Secretary-General (in ministries), the heads of the executive bodies, or the heads of departments. From the crosstabulation table (Table 2), we see that communication of the performance of the staff is done "often" or "very often" and this is a good indicator of the communication within the company being efficient and the managers and employees being able to remedy possible problems and finding solutions faster.

Table 2. Crosstabulation

	How often do you communicate with your staff about their performance?		Total
	3	4	
Your position: Secretary General	18	0	18
Executive Director	10	1	11
Other	0	39	39
Total	28	40	68

If we analyse the feedback techniques in terms of gender, we see that males communicate "very often" with their staff about their performance, whereas females communicate "often" with their staff about their performance.

Table 3. Communication in terms of gender (male)

	How often do you communicate with your staff about their performance?		Total
	3	4	
Sex: Female	23	0	23
Male	5	40	45
Total	**28**	**40**	**68**

To realise the regression, the factorial weight of all our questions needs to be realised first.

Table 4. Factorial Weight

Questions	Factorial weights
Would you like your criticism to be "packed" with praise for your values or bluntly delivered?	.871
If you give a negative evaluation only after praising the other for their performance so far, you do it because of either of the following:	.848
What was the perception of the employees when you used the sandwich technique (praise-criticism-praise)?	.810
Is it important for you to communicate the negative evaluation together with positive messages (to balance the message)?	.777
Do you think that giving negative reviews/evaluations can improve the performance of the administration?	.768
Have you seen improvements in the performance of your subordinates after providing negative feedback on their performance?	.726
What is your message before moving out?	.911
Are you influenced by interpersonal relationships in the way you convey appreciation for the work?	.877
How difficult is it for you to share your dissatisfaction with your employees?	.781
If you were in another institution, in another organisational culture, would you use the "sandwich" technique again?	.762
Does constant criticism undermine the credibility between management and staff?	.743
What is the usual reaction towards the administration in response to negative criticism/messages?	.672
If you have given a negative critique/evaluation, do you allow your subordinates to give justifications?	.910
Extraction Method: Principal Component Analysis.	

From the factorial weight analysis, we see that all the questions are acceptable, considering that their values are above 0.7, except the question "What is the usual reaction of the administration to negative criticism/messages?" which had a factorial weight of .672. The correlation test was performed to see the correlation between the variables before the regression analysis and the testing of our hypothesis.

Table 5. Correlation

	Feedback Technique		Sandwich_feedback_technique
OPS	.910	IIRBM	.901

From the correlation analysis, we can see that we have a strong correlation.

Table 6. Regression: Hypothesis I

	B	Sig.	R Square	Collinearity Statistics	F	H I
				VIF		
(Constant)	-.058	.604	0.828	1.000	316.790	Yes
OPS	1.317	.000				

Dependent Variable: Feedback Technique. Source: Authors

From the analysis, we see that R2 is 82.8%, showing that the independent variables indicate that the variance of the dependent variable is 82.8%. This is a high percentage and means that there are no other variables out of the model that will be able to explain this. Additionally, the F-test shows that we have a stable model because its value is 316.780. This is a high value that shows the stability of the model. It is important to mention that we don't have collinearity in our model, and its value is 1.000, thus lower than 3.000. The independent variable influences the dependent variable; this means that applying a feedback technique can improve the employees' skills and abilities to achieve the established organizational performance standards. The first hypothesis of our study is thus proved.

Table 7. Regression: Hypothesis II

	B	Sig.	R Square	Collinearity Statistics	F	H II
				VIF		
(Constant)	1.471	.000	0.812	1.000	285.536	Yes
IIRBM	1.208	.000				

By analysing Table 7, we see that we are dealing with a significant variable showing that the sandwich feedback technique applied in public administration has a strong impact on the interpersonal and intercultural relationships between managers and civil servants. Additionally, the R2 is 81.2%, which is a good percentage; the F-test value is high and shows that our model is stable. The second hypothesis of our model is thus proved.

DISCUSSION

The research gives us a clear perception of the communication techniques that top-level managers of public administration employ to provide negative feedback. Additionally, the paper analyses the opinion and declarations of top-level managers on how they apply the sandwich feedback techniques in their institutions and how they realize it. However, the study doesn't give us a clear answer about the employees' perception of the sandwich feedback technique. Do they like to directly receive negative messages through a technique that allows them to get a message and answer it, or do they agree that these messages are packaged in a sandwich (even though the meeting would still be criticism and negative feedback on performance) are detrimental? The study focuses on public institutions only and doesn't include the private sector. Other studies can focus on private institutions by analysing the effects of the sandwich feedback technique on employees' performance or how this technique helps managers get things done in the right manner.

CONCLUSIONS

Even though there is a perception that delivering negative performance evaluation messages together with positive ones has an impact on interpersonal relations, we found that this doesn't happen everywhere, and it neither increases fear and anxiety nor undermines the motivation of the staff and their job performance, because the interpersonal relationships the managers have with their staff members are part of inter-cultural relations and are affected by the cultural background and behaviours. So far, in some cases, the use of the sandwich technique might directly affect the maintenance of job performance and job motivation. This is the case with Kosovo Public Administration, where intercultural and interpersonal relations are very sensitive and can play a crucial role in the exit strategy that managers use in their conversations with their staff members. The study shows that applying this feedback technique can improve an employee's skills and abilities to achieve the established organizational performance standards. This technique can also offer an effective method for top-level managers to address the concerns within an organization and improve interpersonal and intercultural relations between managers and civil servants, considering the high impact this technique has according to our findings.

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VISUAL PHONICS: RELEVANT FOR ALL EARLY READERS, ESPECIALLY STRUGGLING READERS

Professional Review

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ABSTRACT

Visual Phonics is a multisensory method for teaching phonological skills using visual, auditory, and kinesthetic modalities and has the potential to improve the literacy development of diverse students, especially struggling readers. Many interventions designed for specific populations (e.g., students who are deaf or have learning disabilities) can be generalized to the larger population of students. However, the potential of these interventions is often overlooked or regarded as not applicable to specific cohorts of students. Visual Phonics is one such example. Therefore, this paper describes visual phonics, reviews selected studies on its effectiveness, and provides instructional activities and strategies of Visual Phonics to show how to use this system effectively.

Keywords: *Visual Phonics; struggling readers; instructional activities and strategies*

Visual Phonics: Relevant for All Readers, Especially Struggling Readers

Reading in any alphabetic language requires children to understand how letters in written words represent the sounds in the spoken counterparts (Adams, 1990; National Reading Panel [NRP], 2000; Snow et al., 1998). This association is complex in opaque languages; that is, in languages that have a complex phonology and morphological system. For example, in English 26 letters represent 45 sounds and that can be spelled in 398 different ways (Morrison et al., 2008). Only a small percent of the population (e.g., in the United States) is consciously aware of phonemes (speech sounds) because speech has no breaks and phonemes are co-articulated (Adams, 1990). Therefore, in order to understand the alphabetic code, most children need instruction on phonemic awareness and phonics. In the United States, about 70 to 75% of the school population understand the alphabetic principle with ease, regardless of the teaching method; however, the other 25 to 30% of the school population, including students with dyslexia and other special education populations, require intensive systematic and explicit phonics instruction (Birsh, 2011).

Phonology is the building block of language and acquiring phonological skills can improve reading development, comprehension, knowledge of language structures, and vocabulary knowledge (Paul et al., 2013). Research has shown that phonemic awareness and phonics are significant components of balanced literacy instruction and strong precursors of conventional reading success (National Early Literacy Panel [NELP], 2008; NRP, 2000). These foundational skills have a strong evidence base for the effectiveness of early and

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conventional reading development for all young children and older children with disabilities as well as children who are at risk for reading difficulties (Adams, 1990; Foorman et al., 2016; NELP, 2008; NRP, 2000; Snow et al., 1998).

Between 30% to 50% of students with disabilities and students who are at risk do not benefit from traditional phonics instruction that is used with typical literacy learners (Morrison et al., 2008). Using a variety of evidence-based strategies is important to ensure that all students can benefit from these instructions. Research has shown that gestures enhance learning and make instruction more effective (Cook & Goldin-Meadow, 2006). Gestures are based on visual and mimetic imagery, and children tend to copy gestures that their teachers make (Goldin-Meadow, 2009). The National Reading Panel (2000) also stressed the motivational value of incorporating hand motions into activities when teaching letters and sounds. Furthermore, research has indicated multisensory phonological awareness training with articulation facilitates early literacy development (Falth et al., 2017; Pieretti et al., 2015).

Students learning styles differ based on their individual needs. Since there is no one best way to teach phonemic awareness and phonics, including a variety of activities and strategies, adding gestures, and using a multimodal approach with articulation are important for effective instruction. Visual Phonics is a multisensory method for teaching phonological skills using visual, auditory, and kinesthetic modalities and has the potential to improve the literacy development of diverse students.

The plan for the rest of this paper is as follows. First, visual phonics is described and then, a few selected studies are reviewed to provide evidence of the effectiveness of Visual Phonics. Finally, based on the findings and interpretations of the selected studies, a few instructional strategies and examples are provided to show the manner in which Visual Phonics can be used effectively.

It should be highlighted that this is a professional review manuscript written in a practitioner manner. That is, the selection and interpretations of research investigations are based on the present author's professional expertise. This approach is acceptable for authors who have a background in and have conducted research on the specific content area. Given this positionality, authors are also able to recommend instructional practices based on their interpretations. The limitations of this approach are discussed in the conclusion section of this article.

What is Visual Phonics?

Visual Phonics is a multisensory teaching method to teach phonological skills such as phonemic awareness, phonics, and alphabetic principles. Visual Phonics, also called See the Sound – Visual Phonics, has 46 hand cues and corresponding written symbols for the sounds of the English Language (Waddy-Smith & Wilson, 2003). Visual Phonics was created by a mother of three deaf children to give them visual and tactile access to the sounds (Woolsey et al., 2006). The hand cues mimic the articulatory aspects of sounds and incorporate visual-motor feature letters to provide visual and kinesthetic access to phonological information (Kart, 2022). For example, the hand cue for the /d/ sound is produced by making an imaginary dot in the air with a forefinger that dips down and the written symbol for this hand cue is a dot as seen in Figure 1. A helpful online visual source can be located at https://www.youtube.com/watch?v=fft9upTmHwo.

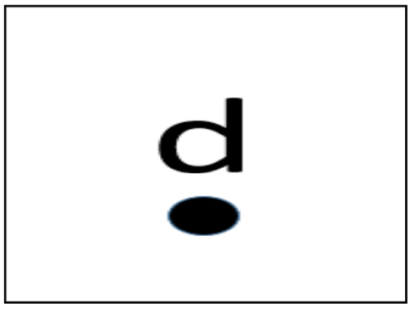

Figure 1. /d/ sound

Even though Visual Phonics has been mostly used with children who are d/Deaf and hard of hearing, it has been shown to be appropriate for children with communication disorders, reading difficulties, and any typical child as an early literary skill improvement tool (Montgomery, 2008). It can also be used in speech therapy sessions and with children who are English language learners. In fact, Visual Phonics can be developed in languages whose sound systems can be represented by the International Phonetic Alphabet system. For example, Visual Phonics has been adapted to languages other than English, for example, Italian, Spanish, Turkish, and Korean, (Cihon et al., 2013; Kart, 2022; Seo, 2013).

It is important to note that Visual Phonics is not a communication method or curriculum, and it is not a grade-specific or stand-alone phonics program. The hand cues can be easily incorporated into any existing phonics programs, so teachers do not need to learn a completely new program that can be expensive and time-consuming (Morrison et al., 2008). Visual Phonics is flexible, inexpensive, easy to teach and learn method that promotes children's learning of hand shapes and articulatory features. It is ready to use method that requires no extra material after initial training. In addition, the usage of Visual Phonics fades when students have mastered the associations between the hand cues and the corresponding sounds.

Research on Visual Phonics

Although research on Visual Phonics has focused mostly on students who are d/Deaf and hard of hearing, it can be an effective strategy for a diverse group of students (Kart, 2022; Narr & Cawthon, 2011). Studies, selected here, have shown that Visual Phonics is beneficial for typical (i.e., hearing) students (Cihon et al., 2008; Gardner et al., 2013; Slauson & Carrier, 1992).

Slauson and Carrier (1992) utilized Visual Phonics as an early reading intervention for kindergarteners with low language skills. Two kindergarten classes were assigned to either a treatment or control group. All students received standard reading instruction, but Visual Phonics hand cues were only used for the treatment group. Based on pretest scores of naming letters, telling the common sound of each letter, and blending sounds to read nonsense syllables, students were divided into three groups: advanced, typical, and slow learners; resource room students were treated as a separate group. When the researchers compared the pretest-posttest scores (seven months apart), they found that students in the treatment group were more successful on posttest scores than the ones in the control group. Slower and resource room students benefitted the most whereas advanced students did not show any significant difference. Overall, it was concluded that Visual Phonics instruction was beneficial for resource room students, slow and typical learners.

Cihon et al. (2008) selected five low achieving kindergarten students for a Visual Phonics intervention program. During the intervention, letter-sound relations were taught with a song and flashcards. The students showed improvement in their understanding of the relations between letters and sounds, and the researchers concluded that using Visual Phonics is appropriate for low achieving typical literacy learners. In addition, Gardner et al. (2013) examined 11 kindergarten students who were at risk for reading failure. The results of this study also indicated that all students enhanced their knowledge of letter-sound correspondences. The studies, reviewed here, provide evidence for Visual Phonics as an effective tool for hearing kindergarteners who are at risk.

Narr and Cawthon (2011) investigated teachers' use of Visual Phonics in their everyday reading instruction. They conducted a national mix-method survey study with over 200 participants including teachers of d/Deaf and hard of hearing students, special education teachers, regular education teachers, reading specialists, and speech-language pathologies. The majority of teachers used Visual Phonics with elementary-age students, and they preferred to use it because of its effectiveness for phonics instructions, spelling, phonemic awareness, vocabulary, and improvement of articulation. Furthermore, more than 80% of the teacher-participants stated that Visual Phonics was easy to use and was engaging to students.

Narr and Cawthon (2011) also reported that some teachers struggled to incorporate Visual Phonics into the existing reading curriculum because there were no guidelines or best practices associated with its use. The researchers concluded that little is known about the use of Visual Phonics, and teachers have difficulty with the incorporation process and need more guidance on how to use it efficiently.

Therefore, the rest of this paper provides a sample of instructional activities and strategies for Visual Phonics. These activities and strategies are based on a professional review of the literature. The reader is reminded that this is only a sample and pertains to the early development of reading skills.

Instructional Activities and Strategies

A practice guide for introducing the foundational skills in kindergarten through third grade by Foorman et al. (2016) recommends teaching segments of sounds in speech and how they link to letters, decoding, analyzing words, and word parts. These recommendations were rated as a strong level of evidence. Using onset-rime awareness, Elkonin sound boxes, memorable pictures with letters, word-building exercises, sounding out or chunking, using a word-analysis strategy to recognize common word parts, using flashcards, and creating word walls are also recommended. These recommended strategies can be incorporated with the use of Visual Phonics.

Visual Phonics contributes to building literacy skills while using multisensory inputs, and it can be adapted to different instructional situations. Teachers' imaginations can produce a range of engaging activities for children. It can be used with all lesson delivery systems (i.e., tutoring, small group, or whole class). Teachers can use Visual Phonics hand cues when teaching phonemic awareness, introducing new letter-sound combinations, distinguishing differences between long and short vowel sounds, and decoding. Table 1 shows steps to use Visual Phonics when introducing a new letter sound. Also, Table 2 demonstrates the lesson plan for distinguishing long-and short-vowel sounds (e.g., bit/bite).

Table 1. Introducing new letter sound with Visual Phonics

1. Teacher holds a card with the letter t on it and says this letter makes the /t/ sound. Watch my mouth while I say /t/ and says /t/ in an exaggerated fashion. Teacher repeats the step twice.
2. Teacher says "now you try it with me".
3. Teacher and student say the /t/ sound and repeat twice.
4. Teacher says, "I'm going to show you a hand sign that looks and feels like /t/" Teacher repeats this step twice.
5. Teacher says, now you try it with me. Teacher says the /t/ sound while making the hand cue and repeats it three times. "Now you make the hand cue with me" while saying the sound.
6. Student says the /t/ sound and makes the corresponding hand cue and repeats three times.
7. The teacher spreads three different cards, one with the letter *t* and two other letters, and asks a student to point to the letter that makes the sound /t/, while making the hand sign then moves to the next student with shuffling the cards.
8. Teacher presents the student with five words that contain the target sound. (The teacher should have 20-30 word cards and each child should have five opportunities to identify the letter/sound.)
9. Student reads the words, making the corresponding hand sign each time she comes to the target sound.
10. Teacher gives the student a sentence with five words containing the target sound embedded. (A different sentence is used for each student.)
11. Student reads the passage, making the corresponding hand cue each time she comes to the target sound.

Adapted from Cihon et al. (2008) and Morrison et al. (2008).

Table 2. Long and Short Vowels

Instructional Objective	Instructional Procedure
Identify differences between long and short "a" words using Visual Phonics and make connections between words such as mad becomes *made*.	1. Word Sort: Long "a"/ Short "a" Teacher provides models as needed. 2. Student sees the word in context (in print) and determines if it's long or short. 3. Student sees *and* says/produces *(using Visual Phonics)* the word, determines if it's long or short.

Adapted from Narr (2006).

The importance of phonemic awareness and phonics instruction is supported by a well-known body of research and viewed as a critical component of reading curriculum in the early grades (Adams, 1990; NELP, 2008; NRP, 2000; Snow et al., 1998). All children have benefitted from these systematic and explicit instructions. Below are the most commonly used phonemic awareness tasks that enable the incorporation of Visual Phonics hand cues:

- Rhyming words— words can be presented using Visual Phonics when rhyming;
- Phoneme counting— students can count phonemes with Visual Phonics;
- Oddity task— when discriminating the beginning, ending, and medial sounds in words, teachers can use Visual Phonics;
- Phoneme blending —students can blend phonemes into words with Visual Phonics;
- Phonemic segmentation— students can completely analyze words into phonemes with Visual Phonics;
- Phoneme manipulation— students can add, delete, or move a designated phoneme of words with Visual Phonics (Adam, 1990; NLP, 2000; Waddy-Smith & Wilson, 2003).

Additional information, including strategies and activities, can be found at

1. http://seethesound.org is the official website
2. https://sites.google.com/a/cesuvt.org/visual-phonics/#:~:text=Visual%20Phonics%20is%20a%20system,in%20teaching%20speech%20and%20reading offers description of hand cues, activities, and strategies
3. http://soundprinciples4literacy.com/index.php/visual-phonics/ offers variety of implementation ideas
4. https://www.youtube.com watch?v=e0GChd7LaZc PaTTAN Literacy Symposium on Visual Phonics

Concluding Thoughts

Developing effective instruction requires an understanding of the underlying mechanisms of early literacy development. Clearly, code-related skills are important for literacy development and need to be taught systematically and explicitly within meaningful and engaging contexts (NRP, 2000). Effective teaching strategies increase learning opportunities, and the quality of classroom instruction in early grades is the best way to prevent reading failure. However, traditional instruction may not be beneficial for all children, therefore; teachers need to use variety of tools, activities, and strategies.

As an alternative instructional tool, Visual Phonics has the potential to improve reading outcomes of diverse students. However, little is known about how teachers use Visual Phonics. Therefore, in this manuscript a few instructional activities and strategies for Visual Phonics are provided. This is important because teachers may need guidance on the usage of Visual Phonics and how to incorporate Visual Phonics to teach foundational literacy skills to diverse students with attention to early readers.

In this professional review only a representative sample of selected studies was synthesized, and limitations need to be addressed. As in any type of literature review, the interpretation of research tends to be somewhat biased because there is a possibility that other scholars may have synthesized related research differently. With this evidence from related research, this article provides strategies and activities for teachers and related services professionals who can use Visual Phonics with their diverse students to help develop phonological skills.

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ACQUISITION OF REAL ESTATE FROM NON-OWNERS ACCORDING TO THE LAND REGISTRY AND PROPERTY RIGHTS LAW IN BOSNIA AND HERZEGOVINA - transformation of the legal rule on gross negligence into the legal rule on doubt

Original scientific paper

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ABSTRACT

Yugoslav jurisprudence has taken an attitude that in addition to examination of the land registry and ownership state of real estate, it is necessary to verify whether the seller is the actual owner and possessor of real estate. The Law on Land Registries of the FBiH prescribes a radically different way of regulating this legal issue, in the way that prescribes gross negligence as a condition of conscientiousness of the later acquirer. In the process of drafting and passing the new Law on the Property Rights, our legislator realized unenforceability of the legal rule on gross negligence in the Law on the Land Registries, and transformed it into a legal rule on doubt as significantly more responsible relation of the later acquirer, according to off-the-record facts related to a certain real estate. The paper analysed the aforementioned legal rules and the goal of the transformation of legal rules was declared through the essential interpretation of the new Law on the Property Rights of the FBiH. Attitudes and proposals de lege ferenda were taken for proper application of legal rules, which should ultimately result in harmonisation of judicial practice.

Keywords: *Conscientiousness, Gross negligence, Doubt, Legal rules on trust protection, Disputes between book and non-book owners*

INTRODUCTION

When judging the conscientiousness of the acquirer of real estate, former Yugoslav jurisprudence valued the subjective sphere of the later acquirer of real estate in a way that the one who, when acquiring real estate, verified factual state of ownership of real estate, is conscientious, that is, it was not enough for him to only check the land books and cadastre property records and that he was not aware of discrepancy between the real estate's land registry and non-registry state, but, in order to be conscientious, he had to check and make sure of factual state of real estate, that is, make sure that the seller is the real owner and property owner (Petrovic, 1969). This attitude of the courts derived its justification from the well-known fact of devastation of land registers. Due to the mentioned practice, some authors considered that the principle of trust is applied with so

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many exceptions and therefore can be considered that it was abandoned in the former SFRY (Povlakic. 2014). The matter of acquiring ownership rights to real estate, at the time mentioned, was regulated by the Law on Ownership Legal Relations (in the text: ZOVO) and the Law on Property Legal Relations (in the text: ZOSP), and the mentioned legal regulations were applied until 2002, when the new Law on the Land Registries entered into force, which in completely different and more radical way regulates this legal issue. The new Law on the Land Registries, as previously stated, regulates the acquisition of property rights in a completely different way, including the issue of conscientiousness of the later acquirer of real estate, which is understandable, because it was imposed by the High Representative, and was modelled after the German legislation, but when drafting it, certain facts that are of exceptional importance for drafting of proper and applicable legislation in our area were largely neglected. First of all, our rich legal tradition and deep-rooted legal postulates, which are indispensable when drafting legal regulations, have been neglected. The aforementioned law was adopted under the auspices of the reform of land registry law, and was considered as the beginning of the aforementioned reform. Law on Land Registries of the FBiH existed as the rule lex specialis until the adoption of the new Law on the Property Rights, which by superficial analysis points to the conclusion that our legislator returned to the provisions of prior regulations that were regulating this matter and that he abandoned the reform of land registry law. As we have already mentioned, this conclusion can only be reached by superficial analysis of the aforementioned regulation, and doing more substantive and detailed analysis of it, it is evident that our legislator recognized the unenforceability of legal rules of the Law on Land Registries of the FBiH, and transformed and adapted certain legal rules to our areas and to our legal tradition, which undoubtedly continued with the reform of land registry law. One of the basic innovations in the new Law on Property Rights of the FBiH and in relation to the Law on Land Registries of the FBiH is precisely regulation of the issue of conscientiousness of the later acquirer of real estate, by transforming the legal rule on gross negligence from the Law on Land Registries into the legal rule on doubt as significantly more responsible relation of the later acquirer to the fact of the seller's ownership, at the indispensable element of conscientiousness (Mutapcic, 2022). We will talk more about this and about all the aforementioned issues, as research problems of this paper, in its continuation.

THE PRINCIPLE OF CONSCIENTIOUSNESS AND HONESTY IN THE INTERPRETATION OF FORMER YUGOSLAV JURISPRUDENCE

Former Yugoslav jurisprudence, as we stated in introduction, for conscientiousness as an essential fact in every legal obligation relationship, and especially when acquiring ownership rights to real estate, required that the later acquirer of real estate, in order to have the characteristic of conscientious acquirer of real estate, it was not enough to just check the land register and property cadastral records and make sure of the registered title to the seller's property, but he also had to check the property's off-book state, that is, the actual ownership state of property (Petrovic. 1969). The off-book condition of the property must be researched before purchasing the property as it states (Simonetti, 2005). Such obligation of research of the off-book or the ownership state of the real estate, has completely degraded the land registry as the basic record of ownership of real estate. In addition to the fact of devastation and neglect of the land registry, such attitudes of jurisprudence have demotivated new acquirers of ownership rights to real estate to initiate procedures for implementation of acquired ownership rights in the land registry, and for the reason that they were convinced and subjectively certain that there is no possibility of losing such acquired right of ownership of real estate relying on the completeness and accuracy of land registries, and regardless the fact that the entry was not completed in land registry, and for the reason they knew that courts also make condition for examination of the ownership of real estate when acquiring the right of ownership of real estate, and what has resulted in passivity and inertness of the acquirer of ownership right to real estate with regard to carrying out registration of acquired ownership right to real estate. „In older jurisprudence, disputes were very common in which the conflict between the registered and non-registered owner was resolved, whereby priority was generally given to the non-registered owner of real estate, who has a stronger legal basis for acquisition under material law. This is because the acquirer, who was registered in the land register, did not check the off-register state of real estate, which is why he was considered negligent "(Mutapcic, Brkic, 2015). With court attitudes that in order to conscientiously acquire ownership rights to real estate it is also necessary to research the off-book or the property's ownership state, not only the land registries have been devastated, but also the fundamental principles of land registry law have been degraded, and above all, the principle of trust in land registries as one

of the fundamental principles of land registry law. By doing this, land registries absolutely lost their essential significance, which resulted in the future as well-known fact of non-updated land registries.

LEGAL RULE ON GROSS NEGLIGENCE FROM THE NEW LAW ON LAND BOOKS

The High Representative for Bosnia and Herzegovina, Lord Paddy Ashdown, using the powers deriving from Article V of Annex 10 of the General Framework Agreement for Peace in Bosnia and Herzegovina, on 21 October 2002 issued the decision promulgating entity laws on land registries, and obliged the legislators to adopt the laws in the prescribed form, without any amendments or additions, or additional conditions. He addressed the Parliamentary Assembly of BiH, explaining that economic investments and economic development were his priority (Mutapcic, 2017). The legal rule on gross negligence was created under the influence of German land registry law, primarily due to the principles of abstract tradition, because the registration is causally related only to the real legal relationship, but not to the legal relationship of obligation (Kohler, 2013; Baur, 2009). The aforementioned law was adopted on the model of the German law, but there was an oversight in part that refers to the existence of preconditions for the adoption of a law with such content and to be enforceable at all. This refers primarily to the fact that in Germany land registries fully and truthfully reflect the factual state of real estate, that is, that the property's ownership state is identical to the records and the state in land registries and that the land registries are updated. The above is basic precondition for passing the law with essential content based on the updating of land registries, which is not the case in our country, and that is why such legal regulation is unenforceable in our area. When adopting the aforementioned regulation, the High Representative did not take into account the fact of devastation of land registries, deeply rooted legal postulates and our rich legal tradition, as well as a large number of property rights acquired outside the register, which undoubtedly had to be taken into account in order for new regulation to be enforceable. The aforementioned law provides the legal rule on gross negligence as a condition for the conscientious acquisition of ownership rights to real estate. „Furthermore, the law requires that third parties who acquire rights to real estate must be conscientious and consider the data in the land registry to be accurate (Article 9, paragraph 2). It follows that conscientious acquisition of rights cannot occur if the inaccuracy of the land registry is known to a third party or is not known due to the gross negligence (Article 9, paragraph 2) "(Waike, 2006). „Gross negligence in this context means that the acquirer of the right has violated the necessary at tention that is usual for real estate transactions on a particularly large scale, which means that he did not pay attention to the basic, simplest and obvious postulates "(Heljic, 2006). If the acquirer, both when concluding the legal transaction and when submitting the application for registration in the land registry, acted with gross negligence, then the possibility of conscientious acquisition of rights is excluded. The acquirer will be negligent if he was aware that the land registry state was incorrect or incomplete or if he was not aware of these facts due to gross negligence. Basically, gross negligence represents the subjective sphere of consciousness of the acquirer of ownership rights, according to facts of exceptional importance both in the obligation-legal business and in substantive law, when submitting an application for registration in the land registry. By prescribing gross negligence as a form of responsibility level of the later acquirer according to the facts and the owner's book state of real estate, it radically breaks with the previous judicial practice, which, as already stated, imposed an obligation to examine the real estate's book state and the ownership state of real estate, that is, off-book state. With the entry into force of such law long-lasting legal tradition and deeply rooted legal postulates end radically, because the law predicts the examination of only the book state of real estate, with the condition that if the ownership state of real estate is different from the book, such fact must not be known to the later acquirer or remain unknown to him due to gross negligence. The new Law on the Land Registries brings increased importance of the principle of trust in land registries, and their importance for the security of legal transactions depends on the level of trust (Medic, 2018). Such legal rules, in truth, strengthen the principle of trust in the land registry as one of the fundamental principles of land registry law, but we believe that a certain principle must not be strengthened to the detriment of rich legal tradition as well as the neglect of a large number of non-registry-based property rights. Gross negligence, in principle, can be understood as the lowest level of responsibility of the acquirer of ownership rights, according to book and off-book facts related to the real estate and the previous owner of real estate on which the right is to be acquired.

THE LEGAL RULE ON DOUBT FROM THE NEW LAW ON THE PROPERTY RIGHTS

Seeing the unenforceability of the legal rules in the imposed Law on the Land Registry in 2014, our legislator, passed the new Law on the Property Rights of the FBiH, which regulates the acquisition of property rights in a completely different way. Among other innovations, transformation of the condition of conscientiousness from the legal rule on gross negligence, in the Law on the Land Registries, to the new legal rule on doubt as level of responsibility of the later acquirer toward ownership state of real estate is also important. A superficial analysis of the new Law on the Property Rights of the FBiH would lead to the conclusion that our legislator has given up on the commenced reform of land registry law and has returned to the legal rules provided in earlier laws which were regulating this matter. Since the previous attitude is not correct or accurate, results from the essential analysis of the legal rules in the new Law on the Property Rights and especially because of legal rules on trust protection and legal rules on conscientious behaviour are foreseen as an integrative part of legal rules of declarative registration in the new law on property rights. Previous laws did not prescribe doubt as a level of responsibility of the later acquirer of rights, and it appears as such for the first time only in the new Law on the Property Rights of the FBiH. „The acquirer will be considered honest, in good faith, if, with regard to the information from the land registry, he did not know nor, considering circumstances, has sufficient reason to suspect that the land registry state is not complete or true " (Josipovic, 2001). With this legal definition and prescription of responsibility level of the later acquirer, there is no doubt that even the appearance of doubt in subjective sphere of the later acquirer excludes conscientious acquisition of rights, and such later acquirer, due to unconscientiousness, cannot invoke the acquisition of ownership rights based on the principle of trust in the land registry.

The reasons that resulted with transformation of the legal rule on gross negligence into the legal rule on doubt.

By regulating the legal rules on the acquisition of ownership rights to real estate and by prescribing doubt as an element that excludes conscientious acquisition, our legislator continued with commenced reform, but when prescribing such legal rules, he bore in mind and took into account our rich legal tradition, deep-rooted legal postulates and the well-known fact of devastated land registries and why only these legal rules are enforceable in our area, because they were adopted on the basis of indispensable facts regarding the acquisition of ownership rights to real estate, but in our area. In addition to uneven decisions about registration, which generated the appearance of uneven legal understandings in the domain of legal theory (Mulabdic, 2018; Babic et al. 2014. Babic, et al. 2011. Povlakic, 2010. Weike, Tajic, 2005), uneven decisions about the required level of responsibility for off-the-books legal facts can also generate the appearance of uneven legal understandings, not only in the domain of legal theory, but also in the domain of judicial practice, which certainly would not favour the already delayed legal transaction of real estate. Therefore, the identified subject of research is essential for the matter of acquiring rights to real estate, and ultimately for the overall process of reform in this area. With the new Law on Property Rights, the principle of trust in the land registry is closely related to the principle of conscientiousness and honesty, which strengthens the very significance of the land registry, but in a manner acceptable to our area, which was, we can say, neglected and abandoned in the past primarily due to the previous court protection, which allowed off-the-record transactions of real estate. The new Law on Property Rights does not prescribe the obligation to research the off-book ownership state of real estate, but it requires unawareness of the fact of differences in relation to book state, and it requires the absence of any doubts in accuracy and completeness of the land registry state. If a later acquirer of ownership rights to the real estate doubts in accuracy and completeness of the land registry, and as such concluded legal transaction and requested registration of the right in the land registry, such an acquirer would be unconscientious, so primarily, in accordance with the principle of conscientiousness and honesty, the legal transaction itself as well as that carried registration would be worthless. Doubt as an element of conscientiousness is closely related to acting in good faith. „The acquirer was in good faith if, at the time of concluding the transaction, and not even at the time when he requested registration, he did not know, nor, concerning circumstances, had sufficient reason to suspect that item belongs to alienator. In order for the acquirer to be conscientious, it is sufficient to research the land registry state, while there is no obligation to research the off-register state of real estate. In this regard, unawareness of acquired off-book state of real estate is sufficient. The lack of good faith cannot be given to someone, simply because he did not research the off-book state" (Mulabdic, 2007). The process of finding suitable (implementable)

reform solutions, such as amended solutions of property law, within them certainly the legal rule of doubt, is on the track of already generously invested efforts, primarily financial (Selimovic, Halilcevic 2017; Povlakic, 2014), and is certainly on the track of preserving the land registry model as the only possible direction of reform in this area (Mutapcic, Dapo, Muminovic, 2021). If a dispute arises before the court regarding the conscientiousness of acquisition of ownership rights registered in the land registry by a later acquirer, the fact of conscientiousness will be determined according to the civil procedure standard that prescribes and requires a certain level of attention expected of any reasonable person in such circumstances. A later acquirer will be considered conscientious if, in concluding the legal transaction as well as in submitting the application for registration, he did not know nor had "good reason to suspect" that the item does not belong to the holder he concluded the obligation legal transaction with (VSH, GZ 516/73 from February 28 1973, VSH, Gzz 32/73 from June 14 1973, Simonetti, 2010). If, in such case, court establish that the later acquirer had sufficient reasons to suspect that the item belongs to the alienator, the later acquirer of ownership rights to real estate would be considered unconscionable, and regarding that, he could not acquire the right of ownership due to negligent actions, which are opposite to the principle of conscientiousness and honesty as one of the fundamental principles of land registry and property right. In the end such an entry in the land registry would be invalid because it was entered on the basis of a void legal transaction as the legal basis for acquiring rights, and therefore, at the request of person interested or person who has a legal interest in a specific legal matter, would be erased. The previous land registry state would be established, or the court, considering the claim, would order the land registry office to erase incorrect entry of the defendant and the entry of the plaintiff who has a valid legal basis for entry.

Principle of conscientiousness and honesty related to the principle of trust in land registries

With this setting of legal rules in the matter of acquiring rights to real estate, and considering the well-known fact of devastation of land registries, the legislator demands more responsible attitude of the later acquirer in relation to the Law on the Land Registries, which strengthens the importance of land registries as well as the principle of trust in land registries but in connection with the principle of conscientiousness and honesty as an integrative part of the legal rules of the new Law on the Property Rights. The legislator also introduces an innovation in this law, and registration is no longer a substantive legal precondition for acquiring ownership rights to real estate, as it entirely was according to the Law on the Land Registries, but instead turn into the function of protection of the right acquired outside the register, because now with the principle of trust in land registries can originally acquire the right of ownership, and in connection with that, there is a loss of the right acquired outside the register that is not registered, which represents a sanction due to non-registration. By prescribing legal rules like this, which in the file essentially transform the importance of registration from the obligation to register to protection of acquired rights in order to exclude possibility of losing rights as a sanction due to non-registration. Non-registered owners are encouraged to register their acquired rights, that generally results with updating of land registries which is the primary goal of the land registry law reform. When a person acquires the right of ownership based on the principle of trust in land registries, it is only important that the acquirer is conscientious, that is, that he acts in good faith, and for conscientiousness, the acquirer is not obliged to examine the off-book condition of the real estate (Medic. 2011).

PROCESS OF FINAL TRANSFORMATION OF PROBLEMATIZED LEGAL RULES

One of the basic innovations in the new Law on the Property Rights of the FBiH is just the waiver of legal rule on gross negligence, which is, as such provided by the Law on the Land Registries of the FBiH, and the prescribing of the legal rule on doubt as significantly greater level of responsibility of the later acquirer according to the ownership legal state of real estate (Mutapcic, 2022). „By annulling the legal rule on gross negligence, as the only form of negligence that excludes possibility of successful appealing to conscientious acquisition, and by prescribing legal solution that prevents conscientious acquisition in circumstances where the later acquirer of real estate had sufficient reasons to suspect that the item belongs to the alienator, the preventive role of notaries or other public officials, in the phase of establishing legal obligations or property rights relations, is even more emphasized, because in that way the possibilities of conscientious acquisition based on the protection of trust in accuracy or completeness of the land registry are significantly reduced" (Mutapcic, 2022). The later acquirer is required to

be unaware of the ownership state of the estate and that he did not have sufficient reasons to suspect the land registry state, in order to be conscientious both at the time of concluding the legal transaction and at the time of registration application. Although exploring the off-book state of real estate is no longer considered as condition for conscientiousness, by prescribing doubt as a condition for conscientious acquisition instead of gross negligence, the possibility of acquiring ownership rights based on the principle of trust in land registries has been significantly reduced. „In circumstances where the former acquirer of real estate, instead of the status of independent or independent qualified owner, has the status of off-book owner of real estate, then that represents the duty of more responsible relation of the later acquirer of real estate towards off-book legal facts, which is the basic intention of the legislator "(Mutapcic. 2022). Our deep-rooted legal postulates and our rich legal tradition are protected precisely by prescribing doubt as a level of attention when concluding mandatory legal transactions as well as requesting registration of ownership rights in the land registry because it would not be fair to prescribe legal rules that would ignore or not recognize a large number of property rights acquired off the books and are not recorded in the land registries, primarily because both, the laws and the courts allowed the off-book sale of real estate for a long period of time, and this fact must be taken into consideration when adopting new laws about this matter. The legal tradition of certain people is an indispensable factor when arranging certain legal issue, especially when it comes to the matter of acquiring ownership rights to real estate, because it is a matter that has a centuries-old legal tradition and as such has been incorporated into the mind of citizens in a certain area, and therefore, it is not subject to radical changes. „According to earlier Laws in the matter on the property rights, it was not possible to acquire the right of ownership of real estate from the alienating non-owner. For the first time, the Law on the property rights of the Federation of BiH allowed such possibility to bring the land registry to a state of accuracy and completeness, even at the cost of non-registered owners who acquired this right from a non-resident, but did not register it in the land register, lose their right of ownership if a conscientious third party concludes a valid contract with the formally registered owner and in that way, according to the law itself, acquires the right of ownership by protecting trust in the accuracy to the land registry. It is desirable that non-registered holders of real rights perform registration also because they risk that a conscientious third party will acquire the right of ownership through the protection of trust in the accuracy to the land registry" (Mulabdic, Mulabdic, 2019). Regarding the acquisition of ownership rights from non-owners, the attitude was taken that it was not allowed, under the justification that no one can transfer more rights than he has to another. As previously stated, the new Law on the property rights introduces a change in this factual situation precisely for the reason of recognition of a large number of property rights acquired outside the books, which existed as such and were allowed even by tacit views of the courts at the time of acquisition.

CONCLUSION

With the adoption of the new Law on the Property Rights of the FBiH, the characteristic of conscientiousness in its essential part of the later acquirer of property rights, underwent changes. With the Law on the Land Registries of the FBiH, the concept of conscientiousness essentially represented acting without gross negligence as level of responsibility of the later acquirer of ownership rights to real estate and according to off-book facts related to a certain real estate, and only the one who acted with gross negligence was considered unconscientious. With the adoption of the new Law on the Property Rights of the FBiH, there is a transformation from the legal rule on gross negligence to the legal rule on doubt as significantly more responsible relation of the later acquirer of real estate towards off-book facts. When passing the new Law on the Property Rights of the FBiH, our legislator bore in mind our rich legal tradition and deep-rooted legal postulates, which are indispensable when passing a certain law. Centuries-old legal tradition, when passing the Law on the Land Registries of the FBiH, was neglected, and that is why a large part of the legal rules of this law was unenforceable. The legal rule on gross negligence in the Law on the Land Registries of the FBiH represents an insufficient level of responsibility of the later acquirer of real estate, and concerning the well-known fact of devastation and non-updating of land registry in our country, and this level of responsibility for off-book facts of the new acquirer of real estate is not in accordance with our centuries-old legal tradition as well as our deeply rooted legal postulates, which are an integral part of our community. If the legal rule of gross negligence is insufficient level of responsibility of the later acquirer also comes from the fact that the courts have allowed, for many years, off-the-record transactions of real estates, and that, too, is one of the basic reasons for land registries not being

the subject matter in an absolutely opposite way to the previous one. All of the above is understandable for the reason that, as stated above, the Law on the Land Registries of the FBiH was imposed law and our legislator had no influence during its creation and adoption, and for this reason, it was omitted to take into account stated facts, which are crucial in the matter of later enforceability of the legal rules in the new law. The Law on the Land Registries of the FBiH existed as lex specialis rule until 2014, when our legislator passes new Law on the Property Rights of the FBiH, and with it regulates the above matter in a completely different way and transforms it from a legal rule on gross negligence to a legal rule on doubt as significantly more responsible relation of the later acquirer of real estate. The aforementioned transformation was necessary due to the large number of off-book ownership rights to real estate and the fact that the land registry was not up-to-date, and ignoring the existing large number of off-book ownership rights to real estates would be contrary to our centuries-old legal tradition and a radical end with it, without a transition period of adaptation or transitional legal rules. For these reasons, our legislator recognized that for conscientiousness is not enough that the later acquirer does not act with gross negligence, and therefore he transformed the aforementioned legal rule into a legal rule on doubt, then prescribed, for the later acquirer to be conscientious, he should not even suspect that land registry state is not accurate or complete. Recognizing key issues and regulating them, respecting our legal tradition as well as other essential elements for the legal rules of one regulation to be fully enforceable, our legislator continued with the commenced reform of the land registry right and created a platform with the new Law on the Property Rights of the FBiH that should result with updating of land registries and motivate later acquirers of ownership rights to real estate to carry out registration of ownership rights in land registries. In addition to the transformation of the legal rule on gross negligence into the legal rule on doubt, the legislator has, regarding this, also changed the function of registration in the land registry, from the function of acquiring ownership rights through registration in the land registry, into the function of protecting property rights acquired outside the register and avoiding sanctions for the loss of off-book ownership rights due to non-registration and under the influence of the principle of trust in the land registries of the later conscientious acquirer of real estate.

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QUALITATIVE RESEARCH METHODS IN SCIENCE AND HIGHER EDUCATION

Original scientific paper

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ABSTRACT

The research possibilities of a qualitative approach have a long tradition in the social sciences and humanities, including different perspectives on theoretical foundations, research strategies, techniques, and data collection and analysis methods. The qualitative methodology first developed in cultural anthropology and ethnology, where the anthropological works of Malinowski, Strauss, Boas, and others marked the foundations of the field method of collecting data and conducting ethnographic studies. However, to date, there is no single definition of qualitative methodology, just as there are no studies that do not require the dimensions of different approaches. Starting from the observation that the question of the compatibility of qualitative and quantitative research methods is still a source of disagreement among researchers, arising from academic criticism of the quality and reliability of qualitative research, this study aims to highlight the role and importance of qualitative research in the scientific and educational process. Through the theoretical analysis of the relevant sources of methodological studies, the authors present some fundamental principles of the qualitative approach and its leading research strategies, illustrating the theoretical aspects with the most important constructs in this methodological area. The findings of this article show that despite the diversity of scientific literature and research on defining the value of qualitative research, a systematic and in-depth study of qualitative methodological issues is still needed to contribute to the improvement of the literature and increase the value of this approach in scientific and educational research practice. Accordingly, although the authors sustain a mixed research approach, they also emphasize the importance of qualitative methods, which should not be viewed separately from the research process.

***Keywords**: methodology, qualitative approach, research, science, education*

INTRODUCTORY CONSIDERATIONS: HIGHER EDUCATION AND CONTEMPORARY SOCIETY

Today's higher education represents the organizational activity of learning, training, and teaching. It is the tertiary level of the entire educational process, which is realized at universities or higher education institutions and their sub-organizational units - faculties. This type of education includes conventional higher education institutions - humanistic, social, natural, and specialized higher

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education institutions - in the field of engineering, science, technology, agriculture, medicine, etc.
The type of education is defined by the curriculum and work program of the organizational units of the higher education institution and determined by legal and framework acts that specify the ways, forms, and conditions of the realization of the educational process. Standards and norms for the performance of higher education activities are fundamental acts at the local level that define all procedures in higher education. Thus, the Standards and norms for the performance of higher education activities in the area of Sarajevo Canton, Bosnia, and Herzegovina, determine the criteria "the fulfillment of which is necessary for the performance of higher education activities." (Sarajevo Canton, 2019) Initially, higher education was reserved exclusively for the privileged class of society, those social individuals who held the conditions and means for schooling. However, by changing the paradigm and realizing the importance of higher education, by democratizing society, efforts were made to make higher education available to everyone. Higher education and science represent a remarkably complex symbiosis that is an element of democracy and openness in every society. The development of information and communication technologies in modern society has made knowledge one of the most important components of social development and of the processes that lead to individual and collective well-being. Today we rightly speak of the knowledge society, which is becoming one of the foundations of society, its economic development, and prosperity. Therefore, within the framework of higher education and education in general, significant investments are beginning. Under these conditions, as Racic (2013) asserts, higher education "is part of the continuity, and no longer the top level of the education system. Through a series of documents, education enters the center of political interest. Educational strategies have been developed and areas needing improvement have been defined." (Racic, 2013: 88) The knowledge society as an expression is determined and clarified by documents that were made as a necessity to shape and define the Bologna Process. At the same time, the knowledge society in the complete sense represents a challenge for the whole of higher education and all its actors. According to Coffey (2001), "education deals with ways of transferring various forms and types of knowledge (...) and teachers are on the front line of educational policy and change." (Coffey, 2001: 85) In the knowledge society, constant education, and training, i.e. acquisition of knowledge and skills is a central component. At the same time, theoretical knowledge and insights are upgraded through the individual development of practical knowledge, skills, and competencies with the intention of active participation of the individual in the development of society and social processes. Learning is a dynamic process of acquiring knowledge and competencies. Area-specific competencies are closely related to a particular area and are also referred to as academic competencies. These competencies form the core of the training and are included in every educational cycle. That is why they are called academic or area competencies. Generic competencies are a set of knowledge, skills, and values that are widely used in different fields of work and allow flexible adaptation to the requirements of different highly specialized jobs. (Vizek-Vidovic, 2009: 34) Focusing on higher education, it can be concluded that this level requires advanced knowledge and learning, but also one that includes critical thinking and understanding for participation in research work. Skills at this level are advanced, they include innovation in solving complex issues and unpredictable problems, i.e. creating new knowledge. If knowledge is the totality of facts, information, and skills acquired through education and experience, then competencies for putting into practice everything learned or adopted can only be a step forward into the practical and real. Therefore, these competencies should include the ability to analyze and synthesize, the ability to learn independently, solve problems and apply knowledge in practice, the ability to adapt to new situations, information management skills, and the ability to work independently and in a team. (Loncar-Vickovic & Dolacek-Aiduk, 2009: 24) For higher education to be able to respond to all social, political, and economic changes in the modern knowledge society, the individual must be actively educated through various forms of formal and informal education. At the same time, continuous investment must be made in the educational process to improve it. All participants in the educational process of the tertiary type to a lesser or greater extent, that is, at a lower or higher level, continuously conduct research using research methods. The main purpose of this research is to arrive at new knowledge or clarification of existing ones, improvements, and discoveries in certain scientific fields, disciplines, etc. Most of the previous studies in the field of methodology primarily focus on the complex constructs of scientific research without emphasizing the importance of a qualitative approach. Therefore, the goal of this research is to identify certain attributes of the qualitative approach that contribute to more effective research in science and thus also in higher education. A special goal is to contribute to bridging the "knowledge gap" about qualitative

methods that are less effectively known. After selecting relevant literature, we try to analyze articles published in magazines, as well as other publications by renowned researchers, following the formulation of the set issue. Our research question is the following: What are the key values of the qualitative approach in scientific-educational research and why do we conduct this type of research?

QUALITATIVE RESEARCH AND QUALITATIVE METHODS

The classification of research in the basic and general sense is done according to the collected data, that is, according to the methods of their collection. Before synthesizing, that is, collecting, these data were collected and then analyzed using a clearly defined methodology and precise methods. According to the collected data, the research was divided into two groups. The first of them is quantitative research, which, to put it simply, "focuses on numbers''. The second is qualitative research that "considers words''. However, although there are many reasons why a researcher might choose one method or another, this does not mean that one is better than the other.

McKay (2006) thinks that in quantitative research, data is analyzed using software and presented through numbers, and percentages, and begins with a written hypothesis that needs to be tested. On the other hand, "qualitative studies start with the assumption that the research topic must be understood 'holistically'." (McKay, 2006: 6) This implies that the center of the research and the method itself is the participant - the individual. Qualitative research and qualitative methods are directed towards the individual himself, his view, and his opinion about a certain problem, phenomenon, or occurrence. At the same time, these researches as well as the methods that follow them represent a very specific challenge for the researcher, that is, the one who interprets the obtained results. Also, qualitative research enables an in-depth approach to a problem or phenomenon. The obtained data are therefore deeper, more detailed, and richer precisely because of the so-called unstructured research strategies. Sliskovic (2017) explains that during qualitative research, that is, with qualitative methods in education and in general in scientific disciplines, the idiographic approach is nurtured - "focus on the experience and perspective of the individual (as opposed to nomoethics - focus on general laws, averages, differences between groups)." (Sliskovic, 2017) Therefore, from the researcher's perspective, it is important to successfully set boundaries in such a way that the research becomes completely meaningful and feasible. In this context, it is inevitable to make many narrowing perspective choices. At the same time, such research emphasizes the individual, under the assumption that knowledge is based on experience, and that social reality is an "individual construct... (...) and they are aimed at the creation and development of theories and concepts." (Sliskovic, 2017) The close relationship between the researcher and the participant in the research process means that the data abounds with individual segments of the participant's life, his biographical elements, and lived experiences on which it is based. For Cilic (2020), qualitative research is empirical research that is oriented towards examining the possibility of direct access and starts by asking questions. In qualitative research, research questions are asked to which specific answers are sought. The goal of qualitative research is to describe and interpret experiences, gather new knowledge, and gain knowledge and understanding without starting assumptions. It is important to point out that qualitative research starts from intuitive knowledge, is aimed at a deeper understanding of the investigated phenomenon, and has more subjectivity. (Cilic, 2020: 42) This further implies that the researcher in qualitative research, among other things, has clear ideas and opinions about the research topic and can discuss them with others. Moreover, he must speak critically about his solutions and possible mistakes, which will not diminish the value of his research but will increase it. In this sense, therefore, qualitative research methods in education include a subjective process of analysis and evaluation of educational phenomena. For Cilic (2020), this research is descriptive "and the data collected by it have the form of words or pictures, not numbers. The data includes correspondence, footnotes, photographs, videotapes, personal documents, memos, and other official records. (...) Thus, qualitative research collects and works with non-numerical data and tries to interpret the meaning from these data that help to understand social life through the study of the target population or place." (Cilic, 2020: 43) Therefore, there is a different approach to processing, but also to interpret the obtained results. Thus, qualitative research relies heavily on the analysis and interpretation of social experiences and concepts through the participant's own experiences and concepts. Creswell (2009) also states that by using this approach, "researchers and practitioners seek to understand, describe, interpret, and develop innovative ideas about context." (Creswell, 2009: 21) Bozkurt & Öztürk (2022) discuss how the realist nature of qualitative research and methods aims to describe how people behave "and what represents and gives meaning to what they do"

(Bozkurt & Öztürk, 2022: 248). Consequently, such research produces an interpretation by the researcher of the reality sought which must be justified. In many disciplines, mostly in the social sciences and humanities, they developed and applied qualitative research. Halmi (2013) states that in these sciences and related disciplines, "there is a different range of plans (blueprints) and goals of the research. Each method is based on a specific understanding of the research subject. [Therefore] qualitative methods cannot be observed separately from the research process and the research object." (Halmi, 2013: 203) Therefore, the specificity of the discipline or science determines the choice of methodology and methods that researchers will use to solve the research problem. At the same time, the accurate positioning of the research problem and its scope also affects the choice of research methods. To Creswell (2009) "qualitative research is a means of exploring and understanding the meaning that individuals or groups attribute to a social or human problem". (Creswell, 2009: 41) Some reasons make qualitative research very diverse. Thus, some researchers are particularly interested in the use of language as a tool for communication and discourse analysis, while others want to understand how people make sense of their lives by focusing on the interpretation of human behavior and human experiences (eg, ethnographic research, narrative analysis, participatory research, theory of research-based approaches, case studies). Marguerite, Dean & Katherine (2006) studied the characteristics of qualitative research and came to the following conclusions: Studies are conducted in a naturalistic environment. Researchers ask broad research questions designed to explore, interpret, or understand the social context. Participants are selected by non-random methods based on whether individuals have information vital to the questions being asked. Data collection techniques include observation and interviewing which brings the researcher into close contact with the participants. The researcher is likely to take on an interactive role in which she or he gets to know the participants and the social context in which they live. Hypotheses are formed after the researcher begins data collection and are modified throughout the study as new data are collected and analyzed. The study provides data in narrative form. (Marguerite, Dean, & Katherine, 2006: 21). In other words, this type of research is aimed at an in-depth analysis of a specific topic. He usually tries to get to know the subject of research in detail, so that he can later conduct other, for example, quantitative ones. It follows from the presented content that qualitative research gives the researcher more discretionary freedom. However, to avoid subjectivity, two conditions must be met: saturation and validity. Saturation occurs when the data collected during the previous research are replicated or are already known, while the validation of the findings enables the "verification" of qualitative research findings. In this context, to confirm the results of the research, it is possible to use another sample, or other cases or analyze the data with other researchers, etc.

ABOUT QUALITATIVE METHODS IN HIGHER EDUCATION

Qualitative methods are also used when examining very complex problems, precisely because they provide a broader, more comprehensive, and diverse view of a problem and phenomenon. The data obtained by these methods are non-numerical, and the methods are based on the researcher's empathic relationship with the members of the studied group. According to Hasanbegovic, in their research process, scientists try to quantify knowledge, to single out quality knowledge that can serve humanity. However, such requires the constant discovery of new knowledge and the setting of precise goals for scientific research. Thus, based on the quantification of knowledge, quantitative measurement methods were developed, and about the need to explain new knowledge and its comprehensibility, qualitative methods of knowledge measurement were developed, resulting in scientific observation. (Hasanbegovic, 2016: 55) Qualitative methods can be said to increase our understanding of the problem because the level of analysis is much more detailed and deeper than that usually covered by traditional research methods. Moreover, qualitative analysis can not only deepen our knowledge of the studied phenomenon but shed completely new light on it, that is, point to what is hidden by subjective experiences inaccessible by other means. (Croatian professional nomenclature, n.d.) The intention of their implementation in the context of education is not only about the nature of the discipline being studied, but also about the improvement of the educational process itself.

Students, e.g. can, through qualitative methods, get very precise data on whether they are satisfied with a certain course, the way the educational process is implemented, and similar parameters, and based on the data obtained, policies can be worked on that will improve the quality of education itself and ways of acquiring knowledge. Problematizing qualitative methods in general, but also placing them in the context of education, Snape and Spencer (2003) state that qualitative methods are a very broad term and that it can be applied to research that has its theoretical origins in many disciplines including anthropology, sociology, philosophy, social psychology, and linguistics. Although diversity is observed in these species, it is possible to define their set of common fundamental characteristics:

- goals aimed at providing an in-depth and interpreted understanding of the social world of research participants by learning about their social and material circumstances, their experiences, perspectives, and their history;
- small-scale samples were intentionally selected based on highlighted criteria;
- data collection methods that usually involve close contact between the researcher and research participants are interactive and often indicate urgent questions that need to be investigated;
- data that is very detailed, rich in information and extensive;
- an analysis that is open to new concepts and ideas and that can produce detailed description and classification, identify patterns of association or develop typologies and explanations;
- results that tend to focus on interpretations of social meaning through mapping and 're-presenting' the participants' social world. (Snape & Spencer, 2003: 5)

For illustrative purposes, we present a set of basic characteristics of qualitative methods in the following diagram.

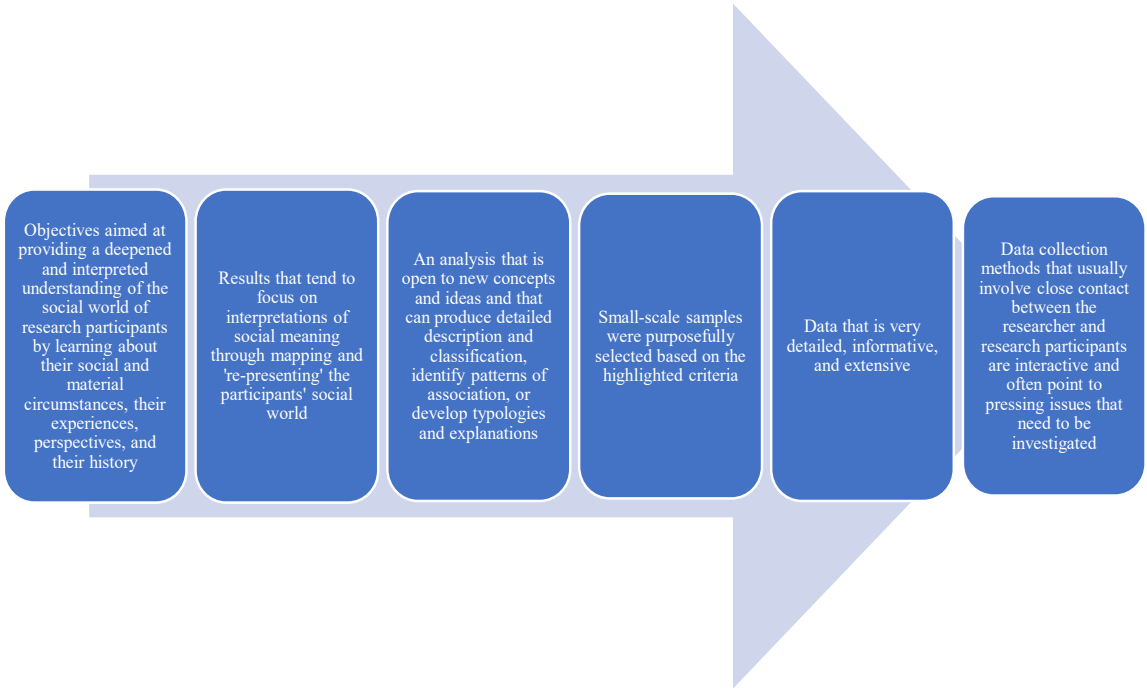

Diagram 1. A set of common basic characteristics of several disciplines in qualitative research [Created by the authors]. (According to Snape & Spencer, 2003: 5)

Qualitative research creates a deep understanding of the attitudes, behaviors, interactions, events, and social processes that make up everyday life. In this way, it helps social scientists to understand how day-to-day life affects the broad layers of society, its structure, order, and all kinds of social types. This collection of methods has flexibility and adaptability to changes in the research environment and can be implemented in most cases with minimal costs. However, the range of these methods is quite limited, since the results are not always sufficient. Researchers must be exceedingly wary of these methods to ensure that they do not influence the data in a way that significantly alters them by introducing, for example, personal biases into the interpretation of the results.

Halmi (2013), states that qualitative research in education is defined by three interrelated generic activities - ontology, epistemology, and methodology. Ontology as a philosophical discipline asks questions about the nature of the reality we seek to know, epistemology as a theory of scientific knowledge asks questions about the nature of our knowledge, and methodology as a logical discipline asks questions about the logical framework of scientific knowledge, but also about the ways and means of how to reach that knowledge. (Halmi, 2013: 204) So, ontology in philosophy means the study of being, that is, what exists and how it is, while epistemology means the science of the foundations of knowledge, that is, the study of different assumptions about the world that will affect how knowledge can be produced. Epistemological assumptions include the basis of knowledge, how knowledge is acquired, its modality, and its nature. The stance that researchers take in this debate affects how research and findings are identified, and the answers to epistemological questions depend on the answers to ontological questions. It should be emphasized that any research, theoretical and empirical, must begin with an ontological understanding, which means that it must begin with the discovery of the parts of the world that need to be explored to obtain knowledge relevant to the formulation of the research problem. Therefore, ontological understanding is the showing of what we experience as 'real'. (Sonne-Ragans, 2019) Alnaim (2018) thinks that various scientists indicate that qualitative research in education, especially in special education, "is a positive motivation towards the development of the education sector. (...) Analyzes prove that qualitative research methods provide coherent, descriptive knowledge, help researchers to find the causes of certain phenomena, to efficiently structure the obtained data and plan further actions." (Alnaim, 2018: 302) . So, in setting the goal of understanding and describing a given reality, a qualitative approach in research proves to be the most appropriate for a better understanding of the subtleties of the phenomenon being studied, while methodological rigor enables the choice of a coherent theoretical framework and methodology, thus ensuring the quality of the obtained results and constructed data.

Speaking about qualitative research in education, Halmi (2013) states that "the logical sequence includes five interconnected phases: 1. the researcher as a multicultural subject; 2. main paradigms and interpretation perspectives; 3. research strategies; 4. methods of collecting and analyzing empirical material; and 5. thart of interpretation, evaluation, and presentation of research findings." (Halmi, 2013: 205) Qualitative methods are represented in the educational process, especially in those disciplines and sciences that are directed toward the individual (psychology, anthropology, sociology, etc.). Regardless of the chosen method, qualitative research includes:

- research topic,
- research questions,
- review of previous research and
- research methodology.

Also, the methodology includes problems, participants, data collection instruments, data collection methods, data analysis, limitations, results, conclusions, and literature. Sliskovic (2017) problematizes how qualitative methods in education and research, in general, are subject to the principles of the constructivist nature of science.

"Science is a social construct set up/imposed by people - who actually cannot directly perceive the real world." (Sliskovic, 2017) . She is the author of the position that qualitative methods are closely related to social constructivism, where "knowledge is maintained by social processes (knowledge is constructed people through their interactions, so our version of knowledge is largely a product of language in the form of conversation)" (Sliskovic, 2017) and critical realism where "critical realists do not deny that there is a real world, but they believe that the researcher cannot directly investigate reality." (Sliskovic, 2017) The researcher observes the empirical domain, but the domains of the real and the real are not necessarily known to him and do not depend only on observation. What separates critical realists from positivists is the fact that, while the latter seeks universal laws that explain phenomena, the former admits that all observations are fallible and can be wrong. Therefore, theories are not fixed, because they can change. (Positivism & Post-Positivism, n.d.)

In a historical overview of qualitative research in education, Halmi (2013) states that qualitative methods have long been used in psychology, along with descriptive methods. As he further states, they appear as monographic studies that are focused on so-called case-study research. In American sociology, biographical methods, case and community studies, as well as many other monographs that described the daily life of people in local communities were central research strategies that significantly influenced the development of the Chicago School of Urban Sociology in the 1930s and 1940s. century. In the late 1970s and early 1980s, numerous techniques were developed for the collection and analysis of empirical

material, among which the following stand out in-depth interviews and participant observation, and among analytical procedures, the development of objective hermeneutics, phenomenological analysis, discursive analysis, and qualitative analysis stand out. content. (Halmi, 2013: 205) The most frequently applied qualitative methods, that is, ways of obtaining research data that are represented in the educational process, are focus groups, interviews, observation, and ethnography. A focus group represents a qualitative research method that is applied in education and includes a smaller group of people who answer defined questions in a moderated environment. The group was selected in a targeted manner according to pre-defined parameters, and the questions were designed in such a way as to bring concrete clarification of the problem. For Paradzik, Jukic, Karapetric Bolfan (2018), "the key task of a focus group is to know the deeper motive behind the rational evaluation of a certain topic and to contribute to a better understanding of the basis of individual and group attitudes, opinions and beliefs." (Paradzik, Jukic & Karapetric Bolfan, 2018: 442) However, although focus groups in qualitative research can provide more accurate feedback than individual interviews, they cannot be a representative sample. There are two fundamental purposes for which we conduct research with the use of a focus group, namely: substantive purposes and methodological purposes. The use of a focus group for substantive purposes is suitable for situations when we cannot reach certain knowledge through the classic way, such as, for example, to investigate the attitudes of individuals who are different from the majority, attitudes that we cannot reach with questionnaires, or the answers to the questionnaires are frivolous or insincere. then when we want to discover much more complex behaviors and motivations, or phenomena. (Paradzik, Jukic & Karapetric Bolfan, 2018: 447) On the other hand, (in-depth) interviews represent a conversation with one person (respondent) whose purpose is to "investigate the beliefs, attitudes, behaviors, experiences, and motivations of the respondents. Unlike other qualitative market research techniques, in-depth interviews are used for sensitive and private research topics that require extensive analysis)." (Coric, 2021: 1) However, interviews can be classified based on very different characteristics, taking into account, among other things, interview structure, interview standardization; whether the interview is conducted with one or more interviewees, and whether the interviewee is a participant expressing an opinion on the topic in question or an expert in his field. They can be unstructured, semi-structured, and structured, and which method of interviewing will be chosen, as well as the number of interviews, depends on the purpose of the research, including research questions, analytical design, collected data, and personal background of the researcher. Qualitative methods are thus applied in the scientific-educational process to describe events, processes, and situations of theoretical importance. These methods often come from psycholinguistics, anthropology, or sociology. Ethnography is also used in these disciplines as a qualitative method and is one of the leading research methods in sociology and cultural anthropology. Sliskovic (2017) states that ethnography includes active participation in group activities, "collection of life histories of group members, direct observation, group discussions and self-analysis of the researcher." (Sliskovic, 2017) In conducting ethnographic research, reflexivity is crucial, that is, the understanding that the researcher is part of the social world he is studying and that he is influenced by it. He can never step out of this world and be an observer (Atkinson 1990). Ethnographic interviews and conversations with tellers during observation considerably contribute to the ethnographer's knowledge, where it is also possible for the research subjects themselves to provide an interpretation of what is happening. In this way, ethnographers add validity to their observations and the research as a whole (Hammersley & Atkinson 1983: 105-107), analyzing the data from the formulation of the research problem to the end of writing the report. According to some researchers, the case study is considered a qualitative method under certain conditions and implies a method that focuses on a precise entity. It can be an organization, an individual, a specific event, etc. Focusing on the context of a specific case - an individual in his social environment, requires the study of as many role holders, interactions, connections, situations, processes, and information that can be defined. Although case studies are a form of qualitative research, they are not limited to field research. In a case study, different forms of data collection are possible, of which the most common are three qualitative methods: documentary research, participant observation, and in-depth interview. Strauss & Corbin (1900) think that the broader definition of qualitative methods in education represents "any type of research where the results were not obtained using statistical procedures or other means of quantification." (Strauss & Corbin, 1990: 129). According to these authors, for researchers using qualitative methods, "the concept of educational equity is not only a question of the distribution of educational material

resources but also a question of the background of the social system of education. In the existing context of the institutional background, cultural issues related to the field of education have always existed" (Strauss & Corbin, 1990: 129). Li (2019) indicates that with the development of society, more and more attention is paid to the education of females, and qualitative research was conducted to evaluate this concept. "Many scholars have used precisely qualitative methods to conduct effective research on a range of issues related to women's educational opportunities, women's educational content, gender differences, curriculum selection, academic evaluation, and future career expectations" (Li, 2019: 11). What is necessary for the entire research process, regardless of which method is represented, i.e. used, is that the collected data must be accurate, that is, they must be realistic so that the research is reliable and relevant. When it comes to qualitative data, is defined through the following categories: Observation (and notes) - represents a qualitative method of data collection. It is mainly carried out with a semi-structured assessment tool, based on asking the respondent questions about what is being observed. It is essential that the interviewee is not quoted and the answers are not suggested. Semi-structured interviews – tools for qualitative data collection that allow researchers to ask respondents questions about a series of predefined topics, but in a way that permits open-ended answers. Open survey - tools for measuring qualitative data that aim to examine how perceptions change over time or serve to gather information about key experiences of respondents. Surveys can use ranked scales such as "always, sometimes, never" or ranked scales from "strongly agree" to "strongly disagree". Videos and recordings - qualitative data, especially those used for narrative or discourse analysis. They arise as part of already created videos, films, recorded interviews, etc. They are essential in those disciplines and education where other observations, such as body language, environmental analysis, etc., are carried out through the consideration of the key topic. Other methods and tools for collecting qualitative data include respondents' diaries, evidence portfolios, and conceptual maps, and some researchers also define case studies as qualitative methods. All these data have an important role in research. At the same time, qualitative research is significant in educational research because it helps to generate new questions, which leads to the questioning of assumptions and finally, broadening our frames of reference. "In short, qualitative research enhances the critical and intellectual dimension of human thinking and allows researchers to see themselves about the wider world" (Edson, 2005: 42). Halmi (2013) states that quantitative researchers in education must be independent of the subject of research, control research situations, and be objective, and that in this sense qualitative methods are 'value-engaged' means that the educator is an active participant in the curriculum that takes place within a certain social-political context. (...) Qualitative research uses a 'naturalistic language' that arises in the everyday speech, actions, and interactions of participants who are actively involved in a specific evaluation program. This language refers to the understanding and interpretation of the sense and meaning of the actor's everyday life situations. The language of the qualitative researcher in education is free and informal and is based on definitions that are formed during the duration of the study (Halmi, 2013: 126). Therefore, the application of qualitative methods in higher education, regardless of which method it is, is a very frequent case, which is aimed at the very goals of the research and what is being problematized. At the same time, qualitative methods represent an element of research when it comes to improving the educational process and scientific teaching quality. For this study, the authors consider it worth emphasizing that in the analysis of the characteristics of qualitative and quantitative research, the difference appears either in the selection of categorical variation (diversity) or in gradual variation (gradation). In other words, between the categorical and gradual interpretation of values. At the same time, it is irrelevant whether the values themselves are represented by numbers or words, or whether respondents consider metric or categorical values (Sandelowski & Barroso, 2003: 12). It is needful to note that in quantitative analysis, multidimensional (or multivariate) description is achieved by grouping variables (items) into scales and subscales based on statistical correlations between variables. These correlations are explored by factor analysis and/or by examining item-total correlations in a "reliability" program in SPSS or other software. (Seale, Gobo, Gubrium, & Silverman (Eds.), 2004: 3)

Table 1. A simple hypothetical example of a coded data matrix with four cases and three dichotomous dimensions (Source: Seale, Gobo, Gubrium, & Silverman (Eds.), 2004: 4)

	dimensions		
cases	D1	D2	D3
1	x	x	n
2	n	n	x
3	n	x	x
4	x	x	n

An analysis focused on the row comparison case will look like below. The combinations of properties by rows are xxn (cases 1 and 4), nnx (case 2), and nxx (case 3). So, there are three clusters of identical cases.

Furthermore, the analysis oriented to the dimensions, i.e. comparing the columns, is given in table 2 below.

Table 2. Dimension-oriented analysis [author's creation]

	x D2 n		x D3 n		x D3 n		
x D1 n	2	1	0	2	x D2 n	2	2
	1	1	2	0		1	0
	I		II		III		

I: $D1 \times D2$: low positive correlation.
Probability Condition: If $D1 = x$, D2 is more likely to be x (if we compare with condition $D1 = n$.)
II: $D2 \times D3$: perfect negative correlation.
Sufficient conditioning: If $D1 = x, D2 = n;$ if $D1 = n, D3 = x, D1x$ is a sufficient condition for $D3n$.
III: $D2 \times D3$: strong negative correlation.

Necessary conditioning: $D3x$ is a necessary condition for $D2n$.
It is clear, therefore, that the data included in the qualitative sample cannot be statistically generalized due to the unknown numerical distribution in the population. Therefore, to increase the coverage, it may be a good idea to consider selecting dimensions and categories. (Schwandt, 1997: 18)

CONCLUDING CONSIDERATIONS WITH RECOMMENDATION

The origin of qualitative research goes back to distant Greek and Latin culture, while some of its various aspects are known in the works of Herodotus and Aristotle. It is clear that this approach enables the analysis of a phenomenon that differs from a quantitatively observed phenomenon, but its advantage should be emphasized, which is essentially finding the same facts from a deeper perspective and understanding issues and problems in their natural context. Despite constant controversies and disagreements about methodological issues and sharp criticism of the quality and usefulness of the qualitative approach, most researchers support the idea of connecting qualitative and

quantitative methodologies, refusing to oppose them. The values of this approach are primarily in its hermeneutic dimensions, which call for the inner logic, deeper meaning, and purpose of human activities and social phenomena, questioning those who experience them or participate in them. For this purpose, it focuses less on cause-and-effect relationships between phenomena and more on values, meanings, attitudes, beliefs, etc. Since the qualitative approach is one of the best ways to discover the characteristics and patterns that shape social situations and problems, we believe that a better understanding of qualitative methods and their clarification can only improve any range of research in the scientific-teaching process. Controversial questions, such as what are the strengths and weaknesses of qualitative methods, how they affect the search for meaning, and whether they are inconsistent with quantitative methods, should have no place in science. Both approaches are certainly important and complementary to each other, and it is necessary to use them based on the nature of the problem and the question asked. At the same time, one should not underestimate the fact that the qualitative approach is one of the two pillars that support science and education, and that instead of highlighting the differences between qualitative and quantitative methods, one should discuss their connection. Because only in this way is it possible to identify gaps or areas of ambiguity in science and the educational process and thereby open up new research opportunities and perspectives.

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COVID-19 SECOND WAVE: EXPERIENCE OF CLINIC FOR LUNG DISEASE, UNIVERSITY CLINICAL CENTER TUZLA

Original scientific paper

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ABSTRACT

The objective of this paper was to present basic clinical characteristics and outcomes of treating Covid 19 patients during the second wave of the pandemic. In the retrospective study for the period from September 2020 to February 2021 it was analyzed disease history data and radiological lung changes, time from the initial start of the disease until hospitalization, parameters of blood gas analysis, comorbidities, and the outcome. The research covered 409 patients, out of which 263 (64.3%) were males. Average age was 67.07± 12.44 years (min. 20; max. 93). A high comorbidities prevalence (82.9%) was noticed out of which arterial hypertension (69.2%), diabetes mellitus (37.7%) and obesity (24.7%). On the radiological lung scan the most noticed changes were consolidation (46.2%), "ground glass" (41.3%) and interstitial changes (13%). Bilateral lung infiltration was noticed in 91.9% of the patients. Average oxygen saturation was 84.29%±10.28% (min. 35; max. 98; med. 87%). In patients with unilateral lung infiltration, average oxygen saturation was 85.09%±8.60% (med. 89%, min.61% max 98%), while in patients with bilateral lung infiltration average was 84.22%±10.42% (med. 87%, min. 35%, max. 98%). From the total all patients' death was noticed in 35.7% cases. Morbidity of patients with unilateral lung infiltration was 27.3% and in patients with unilateral infiltration 36.4%. Hospital admission in the first week of the disease indicates the severity of the clinical condition and can be a predictor of poor outcome. Bilateral pulmonary infiltration, obesity and diabetes mellitus are risk factors for high mortality.

***Keywords**: comorbidity, Covid 19, lung infiltration, outcome.*

INTRODUCTION

The first case of Corona virus disease 2019 (COVID-19) in Bosnia and Herzegovina (B&H) was reported in Banja Luka on March 5 2020, after 34 days WHO had declared the outbreak a public health emergency of international concern (WHO, 2020a). COVID 19 is an acute respiratory disease caused by corona virus 2 (SARS-CoV-2) which is responsible for the development of

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severe acute respiratory syndrome of pandemic proportions (Zhu et al., 2019). COVID-19 is a heterogeneous disease and in most patients it has a mild form and spontaneous recovery, while another subgroup of patients requires hospitalization due to pneumonia and other complications. In initial reports from Wuhan, China, it was reported that one third of patients developed a severe clinical picture with the development of acute respiratory distress syndrome (ARDS) (Huang et al., 2020). In patients with a severe form of Covid-19, the most common comorbidities are arterial hypertension, diabetes mellitus, chronic obstructive pulmonary disease (COPD), obesity, and cardiovascular diseases. About 70% of patients requiring intensive care had comorbidities (Gasmi et al., 2021). Covid19 spread rapidly throughout the world and was declared a pandemic by the World Health Organization (WHO) on March 11. 2020 (WHO, 2020b). As of June 13. 2020, there have been nearly 8 million confirmed cases and more than 425.000 confirmed deaths due to COVID-19 worldwide (He et al., 2020). Globally, as of July 29. 2022, there have been 572.239.451 confirmed cases of COVID-19, including 6.390.401 deaths, reported to WHO. The gold standard for diagnosing patients with COVID-19 is the reverse transcription-polymerase chain reaction (RT-PCR) test with a sensitivity of 79% and a specificity of 100% (Kanne et al., 2020). The lungs are primarily affected in COVID-19, so it is common practice to perform a chest radiograph (CXR) as the initial imaging examination in suspected cases. The diagnostic value of CXR in the early stages of COVID-19 is limited and pathologic findings may not be detected on radiographs that can be identified on chest CT (Wu & McGoogan, 2020). Although less sensitive, CXR is available in emergency centers, clinics, and hospitals and can help diagnose COVID-19 (Hansell et al., 2008). Radiographic characteristics were diagnosed according to the type of infiltration as opaque glass shadow, ground glass opatificatio (GGO), consolidation type shadow and interstitial infiltration. One of the most common abnormalities seen on CXR in patients with COVID-19 is consolidation. Consolidation is one of the most common abnormalities seen on CXR in COVID-19 patients. It refers to the phenomenon where the pathological products such as water, pus and blood fill the alveolar spaces in the lungs. Consolidation homogenously increases the attenuation in lung parenchyma (increased density) by obscuring the edges of the blood vessels and walls of the airways. Air bronchogram, a visualization of air bronchial lumens within the parenchymal opacity of the lungs and, therefore, showing the airway patency (Jacobi et al, 2020), is a demonstration of consolidation. Patients with this type of infiltration had more severe clinical symptoms and more often ended up with the need for respiratory support. The opacification of lung parenchyma that produces slight increase in attenuation for consolidation is described by ground glass-type infiltrates (GGO). The walls of the bronchi and pulmonary vessels remain differentiated from the involved parenchyma despite the increased density. GGOs may potentially precede the appearance of consolidation and they are common in earlier presentations.There are no published data on the second wave of the Covid 19 pandemic in Bosnia and Herzegovina. Our study aimed to show the clinical and radiological characteristics of patients, the outcome of treatment, from the area of Tuzla Canton suffering from Covid-19 during the second wave of the pandemic, who were hospitalized in the Clinic for lung disease, UCC Tuzla. Furthermore, we discussed the possible reasons for the high mortality rate in the second wave of the Covid 19 pandemic.

PATIENTS AND METHODS

A retrospective study analyzed the data from disease history of patients that were hospitalized at the Covid hospital for the period 1st September 2020 until 28th February. Inclusion criteria were positive PCR test for Covid 19, age older than 18 years, patients with moderate and severe clinical presentation of the disease. Exclusion criteria were patients on invasive mechanical ventilation, psychiatric and surgical patients suffering from Covid 19. It was analyzed radiological changes on lungs, time from the begging of the disease until hospitalization, gas analysis of blood, comorbidities, and the outcome of treatment for 409 hospitalized patients in the second wave of the Covid 19 pandemic. The study was carried out with the consent of the Ethics Committee our institution, number: 02-09/2-17/21. 14.04.2021.

Methods

The diagnostic RT-PCR method for detecting SARS-CoV-2 virus from the respiratory tract (by nasal and/or oropharyngeal swab) was used in order to confirm COVID-19. The following analyses were performed in all patients: complete blood count (CBC), C-reactive protein (CRP), aspartate aminotransferase (AST), alanine aminotransferase (ALT), lactate dehydrogenase (LDH), ferritin, urea, creatinine, blood gas analysis, electrolytes, D-dimer, creatin kinase (CK), creatin kinase-MB (CK-MB), troponin).

All the chest x-rays were acquired as a digital radiograph in the anteroposterior projection. The radiographic features were diagnosed according to the Fleischner society glossary (Hansell et al., 2008). The definitions were as follows: Ground glass opacity (GGO) - increase in lung opacification which does not obscure the blood vessels and airways; consolidation - a homogenous opacification obscuring the blood vessels and airway walls; reticulation - a collection of innumerable small opacities in a linear pattern. The distribution of the lung lesions was classified into: unilateral or bilateral. All comorbidities as well as length of hospitalization and outcome were recorded. The patients were treated with oxygen, corticosteroids, low weight molecular heparin and therapy for comorbidities.

Statistical analysis

Descriptive analysis is applied to all data. $\chi 2$ test was applied to check the independence or association of the variables. To determine the relationship between the type of infiltration and the blood O2 saturation value, the point-biserial correlation coefficient was calculated. The $p < .05$ was considered statistically significant.

RESULTS

The research included 409 patients, of which 263 (64.3%) were male patients, 146 (35.7%) were female. The youngest patient was 20, and the oldest 93 years of age. The average age was 67.07 12.44 years. The largest number of patients were hospitalized in the first week from the onset of the disease 259 (63.3%), then in the second week 143 (35%), and in the third week 7 (1.7%) of patients. In the observed period, there was a high overall prevalence of comorbidities of 82.9% in patients suffering from Covid 19 (Table 1).

Table 1. Comorbidities of hospitalized patients

Comorbidity	No (**%) of patients**	
Hypertensio arterialis	283	(69.2)
Diabetes mellitus	154	(37.7)
Obesity	101	(24.7)
COPD	23	(5.6)
Cardiac disease	93	(22.7)
Malignancy	21	(5.1)
Fibrillatio atriorum	10	(2.4)
Asthma	6	(1.5)
ICV	5	(1.2)

The largest number of patients, of them 127 (31.1%), had, in addition to COVID 19, two other diseases. Out of the total number of patients, 107 (26.2%) of them had one more, and 73 (17.8%) three diseases. On a conventional lung scan (X-ray scan), interstitial changes were present in 53 (13%) patients, while “ground glass” was more significant, i.e. in 169 (41.3%), while consolidation-type changes were present in the largest number, 189 (46.2%) patients. Bilateral lung infiltration was present in a total of 376 (91.9%), and unilateral in 33 (8.1%) patients. In the study, an extremely significant overall representation of bilateral infiltration, compared to unilateral infiltration, is observed, both in total and by week. The lowest value of blood O2 (sO2) saturation in all patients was 35%, and the highest was 98%, while the average value was 84.29%±10.28%, and the median was 87% (Table 2).

Table 2. Blood O_2 saturation values

sO_2 (%) (No of patients)	**Xmin-Xmax**	**$\bar{X}$**	**M_{ed}**	**SD**
Unilateral lung lesions (33)	61 – 98	85.09	89	8.60
Bilateral lung lesions (376)	35 – 98	84.22	87	10.42
Total (409)	35 – 98	84.29	87	10.28

Xmin-Xmax - minimum – maximum; $\bar{X}$ (mean); SD (standard deviation); M_e (median)

Correlation analysis, based on the calculated point-biserial correlation coefficient (rrb = -.02), did not establish a statistically significant connection between the type of infiltration and sO2 at the level of statistical significance $p < .05$ It can be concluded that, regardless of the type of infiltration, sO2 values were on average equally represented. Out of 409 hospitalized patients, 146 (35.7%) died. Mortality rate was about 9.1% higher with bilateral, compared to unilateral infiltration 27.3% vs 36.4%, but without statistical significance (p = .37) (Table 3).

Table 3. Relationship between the type of lung infiltration and the outcome

Infiltration type	**No (%) of patients outcome**		
	Death	**Survival**	**Total**
Unilateral infiltrate	9 (27.3)	24 (72.7)	33 (100.0)
Bilateral infiltrate	137 (36.4)	239 (63.6)	376 (100.0)
Total	146 (35.7)	263 (64.3)	409 (100.0)

DISCUSSION

In our study, we analyzed 409 patients who were hospitalized in the "second wave" of the Covid19 pandemic. The largest number of patients were hospitalized in the first week from the onset of the disease, suggesting the high prevalence of severe clinical forms of Covid19 from the beginning of the disease, which is one of the characteristics of the second wave of the Covid19 pandemic. Identical results were published by Bhatraju et al. (2020) found that seriously ill patients who required intensive care reported in the first week of illness, i.e. 4 to 7 days before admission to the hospital. In our study, males predominated among hospitalized patients, as well as patients older than 60 years. We also observed a significant association between patient age and time from initial symptoms to death. N. Chen et al. (2020) reported in a study on patients from Wuhan at the beginning of the Covid 19 pandemic that older patients had more severe forms of the disease. Bienvenu et al. (2020) reported that male patients with COVID-19 had a more severe clinical conditions, higher complication rates, and higher mortality. Contrary to them, Ruan et al. (2020) found no difference between the representation of hospitalized males and females; the authors pointed out that the largest number of patients who ended fatally belonged to an older age group, being over 60 years old. By analyzing the clinical status of our patients, a high overall prevalence of comorbidities of 82.9% was found of which arterial hypertension diabetes mellitus obesity and heart disease was the most prevalent these diseases also accompanied the deaths of patients suffering from Covid 19. Wang et al. (2020) reported similar results indicating that patients with comorbidities (including diabetes mellitus, cardiovascular disease, respiratory disease, hyperlipidemia, obesity, and chronic kidney and liver disease) will develop more severe forms of Covid19. Cardiovascular diseases were present in 2.5-16% of patients with COVID-19 (R. Chen et al., 2020; J. Yang et al., 2020). Some of the most common complications of the cardiovascular system are acute myocardial damage, myocarditis, myocardial infarction, heart failure, rhythm disorder and thromboembolism.

And there are interactions with cardiovascular drugs that should also be considered (Long et al., 2020). One of the studies, that included more than 44,000 patients with COVID-19 who suffered from cardiovascular system diseases, showed a fivefold increase in mortality compared to initially healthy patients. Berrill et al. (2021) indicated a high prevalence of hypertension and diabetes in patients suffering from Covid19. Obesity is a risk factor for poor disease outcome in patients with COVID 19. Data show that obese people stayed longer in the hospital and had a 5 times higher risk of death (Rossi et al., 2021). There is a lot of evidence in the USA, the country with the highest obesity rate, and their data highlighted obesity as a risk factor (Hur et al., 2020). The facts that SARS-Cov-2 infection results in lung tissue damage, that obese people have reduced lung function, and that, in comparison with patients of normal weight, it is difficult to compensate for the lack of oxygen with invasive mechanical ventilation (IMV) are already known. Peng et al. (2020) pointed out the association between increased body mass index (BMI) and survival. Patients who ended fatally, had a BMI > 25, which is significantly higher than those who survived. Diabetes mellitus as a comorbidity has a higher risk of harmful effects due to infection (Bode et al., 2020). According to N. Chen et al. (2020) and Bienvenu et al. (2020), the prevalence of diabetes among hospitalized patients with COVID-19 fluctuated in the range of 10-34% and even more according to some other studies. There have been numerous studies in China and Italy that shown a more severe clinical course of SARS-Cov-2 infection that required transfer to the intensive care unit and mechanical ventilation in patients with diabetes (J. K. Yang et al., 2010; Fadini et al., 2020; Xie et al., 2020). On conventional lung imaging (X-ray imaging), consolidation-type changes were the most prevalent (46.2%), "ground glass" was present in 41.3%, while interstitial changes were present in 13% of our patients. Bilateral lung infiltration was present in 91.9%. Similar data were published by Wong et al. (2020), and indicated that the most common changes in the lungs are consolidation (in 36–47% of patients) and ground glass type changes (in 20–33%), typical peripheral localization. Colman et al. (2021) and Cao et al. (2020), have indicated that ground-glass type infiltration is strongly associated with death. Fu et al. (2020) in a meta-analysis of 43 studies that included data obtained from 3,600 hospitalized patients reported that the largest number of hospitalized oxygen-dependent patients had ground glass-type infiltrates (80.0%) and bilateral pneumonia (73.2%). A particularly interesting phenomenon relates to the very similar results for the average sO2 values in patients with unilateral and bilateral lung infiltration in our study. Regardless of the type of infiltration, sO2 values were on average equally represented in both groups. If a resting oxygen saturation is < 95%, then it is considered abnormal. It has been established by Karimi et al. (2020) that an oxygen saturation < 93% with assisted oxygen or < 90% on room air as a sign of severe pneumonia. Some other studies also depended on oxygen saturation ≤ 90% by pulse oximetry to define hypoxia in the pneumonia severity index. In the study by Maha et al., ground glass opatificatio (GGO) and consolidation had no significant relationship with oxygen saturation and patients' condition. The study observed an extremely high mortality rate of hospitalized patients with COVID-19, However, no statistically significant difference was found in the distribution of mortality in relation to the type of infiltration. In the analyzed literature from the period from the beginning of the Covid19 pandemic to the end of February 2021, there are different data on the mortality rate, which ranges from 21.9% published by Wu et al. (2020) to 61.5% in the study by X. Yang et al. (2020).

In our study prehospital pulmonary function tests and radiological imaging were not available, therefore patients who had severe/critical illness may have had predisposing undiagnosed lung disease and consequently worse lung function at follow-up.

CONCLUSION

The largest number of patients were hospitalized in the first week from the onset of the disease, suggesting the high prevalence of severe clinical forms of Covid19 from the beginning of the disease, which is one of the characteristics of the second wave of the Covid19 pandemic and can be a predictor of poor outcome. Bilateral pulmonary infiltration, obesity and diabetes mellitus are risk factors for high mortality.

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TRANSPARENCY DECLARATION

Competing interests: None to declare.

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ORGANIZATIONAL FACTORS AND ETHICAL DECISION-MAKING PROCESS DURING THE COVID-19

Original scientific paper

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ABSTRACT

Aim. The researcher's goal is to investigate how organizational characteristics affect the process of making ethical decisions. Methods. The study's focus was on certified accountants working in Kosovo during the Covid19 era. The task is qualitative in nature; SPPS is used to process the data after Excel has done so. This study used descriptive and regression analysis. Results. The study demonstrated that organizational criteria like size, industry, the presence of an ethics code, and ethical climate have an impact on how decisions are made. To identify organizational elements and, as a result, improve the ethical decision-making process, the paper's findings may have policy implications. Conclusions. This study provided insight into how to increase the influence of organizational elements in ethical decision-making, particularly in the accounting field. A sound foundation for an ethical decision-making process that is sustainable is provided by the recommendations at the end of the paper.

***Keywords**: Certified accountants, Ethical decision-making process, Organizational factors, Kosovo.*

INTRODUCTION

With the growth of enterprises, consideration has also been given to how employees conduct themselves while working, particularly in a pandemic situation like COVID-19. The likelihood of unethical behavior grows with independence in a dynamic context. Employees' unethical actions, particularly those of those in the accounting profession, have frequently led to an adversarial and dishonest workplace atmosphere around the world. Unethical labor has led to bankruptcies and other business failures. Numerous types of research have been conducted on this subject, but only a very small portion of them have been conducted in nations with growing economies, like Kosovo. Although codes of ethics have been around for a while, Kosovo has been slow to implement them. Professionalism is linked to ethical standards and professional abilities. No company can function today without an accountant. Accounting principles and the ethics of the accounting profession must be followed by those who are in charge of preparing financial statements for them to be 100% accurate. The demand for accountants is substantial and has expanded significantly, particularly in the field of financial operations.

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This paper examines how organizational factors affect certified accountants' ability to make moral decisions in Kosovo-based businesses. The findings of this study are important because they provide insight into several key organizational traits, such as the industry in which a company operates, its size, the existence of an ethics code, and the impact of the ethical environment on the process of making ethical decisions. The findings of the present paper may have policy repercussions with the aim of identifying organizational determinants and, as a result, boosting the ethical decision-making process. In the first section of this article, based on the literature, organizational characteristics and the procedure for making ethical decisions are reviewed. The study methodology, the model that was used, the hypotheses and the research tool, the participants and sampling, the process of data analysis, and the study limitations are all described in the second section of the paper. The research findings and discussions are presented in the third section of the article, with an emphasis on the goals stated at the beginning of the paper and the accomplishment of the study purpose. The conclusion and a few suggestions are provided in the current paper's last section. These recommendations deal with organizational issues and the ethical decision-making process and may be helpful for the policy-making process in various Kosovo companies.

LITERATURE REVIEW

Ethics and the importance of ethics in the accounting profession and the decision-making process

The word ethics has numerous variations. It is described as an inquiry into the nature and philosophical underpinnings of morality, where morality is understood to refer to moral judgment, standards, and guidelines for behavior. The study and philosophy of human behavior, with an emphasis on the definition of right and wrong, is another name for ethics. Ethics encompasses more than merely customary or accepted norms of behavior. Honesty, objectivity, and justice define ethics. Everything and every area of business activity, including boardroom tactics, how organizations treat their employees and suppliers, sales methods, and accounting procedures, is governed by ethics. Commitment, awareness, and competence are essential components of the ethical decision-making process. Business ethics play a significant part in boosting a company's productivity and profitability as well as enhancing its reputation in the marketplace. Professional and commercial ethics are among the most powerful social and economic forces of our time, and economists have found that they are one of the main causes of business expansion and development. In pursuing business ethics, several problems relate to corporate goals, workers, the national interest, etc. (Ambujakshan, 2011) For many reasons, proper ethics and ethical behavior are crucial to accounting. Accountants frequently have private data relating to their clients. Due to the significant power, this offers accountants over their clients, they mustn't misuse their relationship of trust. Any business endeavor that seeks to successfully combat them in the marketplace and enhance the effectiveness and capabilities of the firm as a whole must raise ethical standards. The fact that an accountant must be impartial and loyal to the business organization while carrying out operations related to it with all sincerity and honesty is one of the most significant factors that attests to his or her ethical behavior. Key economic actors use and demand financial statements created by accountants that end up in the hands of stakeholders to make the fairest investment decisions. The accountant's professional ethics are crucial for fostering a culture of accountability and good moral principles. Both the accounting profession and the process of making moral decisions depend greatly on ethics. If an accountant conducts themselves professionally and adheres to all of the Code of Ethics standards, their users can be assured that the information they produce is accessible, trustworthy, and transparent. Additionally, a company's decision-making process is crucial because it is the primary driver of its success and high performance in both the short and long terms. The professionalism and skills of an organization's accountants are more trustworthy, accurate, and pertinent to the information they produce. The likelihood of making moral decisions increases with the amount of better information available to decision-makers. The higher the company's performance, the more important ethical decisions are to it.

Organizational factors and the ethical decision-making process

The process of making ethical decisions is influenced by a wide variety of circumstances. Some of these include moral intensity, and organizational, and individual issues. The organizational aspects of this study are the main topic. The results show that organizational elements including rules of conduct and how they are enforced, rewards and sanctions, peers and management, ethical training, and corporate culture all have a role. (Ross, 2003). The size of the business, the industry,

the code of ethics, and ethical guidelines are organizational elements that affect how ethical decisions are made. According to the (Treviño, L. K. , 1986) paradigm, organizational factors frequently affect a person's ethical judgments.

Code of Ethics

The ethical standards that guide decisions and behavior in a business or organization are described in a code of ethics and professional conduct. Because of their potentially significant relevance to ethical judgments, codes of ethics have been extensively studied in the literature on business ethics (Loe, T., Ferrell, L., & Mansfield, P, 2000). Codes of ethics are "written documents that organizations believe will impact employee behavior and promote change by making clear assertions about desired behavior," according (Stevens, 1994) An organization's code of ethics can offer valuable direction on how employees should behave (Pater, 2003). The organization's reputation and brand image are improved by the code of ethics (Singh, 2005). A popular organizational policy used in commercial organizations is the code of ethics; this policy often establishes the minimal criteria that proprietors, managers, and employees must adhere to when carrying out various corporate responsibilities. The code of ethics, according to (Langlois, 1990) is a declaration that outlines the organization's principles, rules of conduct, ethics, code of practice, or company philosophy, as well as the duties of the company's stakeholders, including its shareholders, customers, the environment, and society. They have provided a definition that outlines the essential components that any ethical code should have. Organizations have created their owners of ethics for a variety of reasons. Concerns concerning the obligation of individuals to behave ethically within the organization have continually been raised by external forces, including those from the government, the public, professional associations, and consumers. The content of the code of ethics varies based on the organization, however all or, organizations' codes of ethics generally cover some ethical topics. According to research, the substance of the code of ethics often covers three ethical categories: concerns about the organization, and issues about society at large. Some studies have examined the code of ethics' substance, while others have examined whether or not the organization has one and how effective it is. According to several studies, the code of ethics mainly addresses problems with behavior inside the business. In the literature on corporate ethics, several publications have examined how the organization's code of ethics functions and have come to some intriguing conclusions (El'fred, 2001). According to studies, the existence of codes of ethics has a favorable effect on ethical behavior within the organization (Wotruba, 2001). Although it is contended that the organization's code of ethics may not be enough to guarantee that members of the staff make moral decisions when faced with a variety of moral dilemmas (Cleek, 1998). One way to ensure that the code of ethics is strong enough is by making it known to all members of the organization and by upholding it internally (McClaren N., 2000). In the review by (Loe, T., Ferrell, L., & Mansfield, P, 2000), fourteen studies relating to the influence of the code of ethics on people's ethical judgments have been documented. Similar to the (Ford, 1994) review, the majority of their ten studies, including (Barnett T., 1993), found that the code of ethics has a sizable positive connection with ethical decision-making. According to (Ferell, 1978) are two studies that discuss the code of ethics and the process of making ethical decisions, even though the other researchers do not (1994). One of the types of research, notably the one carried out by Weaver, Trevino, and Cochran, investigates the stage of ethical recognition and indicates significant favorable outcomes. Five studies have examined the ethical judgment phase; three of them found no significant relationship between the two factors, while the other two, (Adams, 2001) and (Stohs, 1999), examined the ethical purpose stage; only one of them discovered a beneficial relationship between the two factors. According to (Craft, Jana L., 2013) overview, there were significant studies that examined the impact that the code of ethics had on the process of making ethical decisions between the years 2004 and 2011. During this time, three studies on the stage of ethical recognition have been conducted, and each of them has produced a unique conclusion. More specifically, the study carried out by (Deshpande, 2009) concluded that in addition to the code of ethics, the organization must put in place a process that will make sure that the employees of the organization consider the working organization's ethics when making moral decisions. The third study was done by (Bohm, 2001), who claimed that the code of ethics that behavior is not sufficient to affect the moral consciousness of employees. Another study that has been done on this stage is the study done by (O'Leary, 2007), which claims that the existence of a strong code of ethics does not help internal auditors to behave ethically when faced with any ethical dilemma. The first study was carried out by (Pfughrath, 2007), and they indicate that the presence of ethics appears to have a greater impact on the judgments of professional accountants than on accounting students.

The second study was carried out by (Pfughrath, 2007). Although different studies have produced varying conclusions, the majority have backed the claim that adhering to the code of ethics is associated favorably with ethical recognition, purpose, judgment, and decision-making.

Ethical clime

Ethical clime is another variable of great organizational importance, the environment of events in the field of business ethics has been analyzed for more than three decades. According to a study by (Victor B., 1987), companies have an ethical clime as "the main perception of typical practices and procedures of things that have ethical content". They argue that the ethical clime at work will be due to informing resources about the "right" or ethical connection within organizations. Looking at the theory of moral philosophy and the theory of moral psychology (Kohlberg, L., 1981), (Victor B., 1987) adds that the ethical climate within organizations is different in different categories of ethical theory (kindness and principle) and three levels of reference groups (individual, local and cosmopolitan). This structure has been used by a large number of studies and has so far been evaluated as the most complete framework. The study by (Victor B., 1987) suggests that climes characterized by self-interest (selfish/individual) and strong interest (selfish/local) are more likely to be associated with questionable or unethical behavior. Whereas, the climes that were characterized by following the law and professional codes (principle/cosmopolitan) and social responsibility or serving the public interest (benevolent/cosmopolitan) must be accompanied by ethical decisions. In surveys conducted by (Loe, T., Ferrell, L., & Mansfield, P, 2000). So, in the summaries of the ethical climate literature review, we saw that the types of ethical clime are significantly related to ethical recognition, judgment, and purpose. (Treviño, L. K. , 1986) argue that evidence from a few previous types of research suggests that a small number of ethical dimensions should be used to explain some features of the ethical context within the organization. From a large number of studies related to the ethical climate, there is still little literature regarding the relationship of these factors with the stages of the decision-making concluded summaries that have been made to-date give us important results regarding the relationship between the ethical clime and the stages of the decision-making process. In the summary made by Ford and Richardson, no study is reported regarding the relationship between these two factors. In the review conducted by (Loe, T., Ferrell, L., & Mansfield, P, 2000), four studies on this issue have been reported. Three of these studies show that ethical clime is strongly associated with ethical decision making and here we can mention (Schwepker, 1997); (Verbeke, 1996). A study by (Elm, 1993) asserted that ethical clime has nothing to do with the stages of the decision-making process. It is also worth noting that research conducted by (Forte, 2004), concluded that there is a statistically significant relationship between levels of management and the ethical clime of the organization.

The size of the organization

Another significant factor that may influence employees' ethical judgments is organizational size, which is also frequently used as a control variable in organizational research. According (Weber, 2002), they have concluded that an organization's size affects the decisions made by the people who work there. Small and large organizations have different work environments, (Appelbaum, 2005). It also points out that while support structures are not utilized in small firms where moral judgments must be made, they are advantageous in large enterprises. (Vitell S.J. and Festervand, 1987) assert that for large organizations to compete, small businesses may be compelled to act unethically (Ford, 1994) come to the opposite conclusion, concluding that there is a strong negative link between organizational size and the ethical judgments of individuals, such that as an organization's size increases, individuals' ethical behavior declines. Three studies examining the link between organizational type and moral decision-making have been reported; one of them, for instance, found that people working for large firms are more prone to take bribes and favors from their clients.

According to the findings of three investigations, study participants' ethical judgments are unaffected by the sort of industry they work in. However, recent research has indicated either no significant connections or a largely positive relationship between organizational size and ethical choices (Doyle, 2014); (Marta, J. K. M., Singhapakdi, A., & Kraft, K. , 2008); (Sweeney, 2010)).

Type of industry

On an individual's ethical choices, the sort of industry is believed to have an effect (Oz, 2001). People who work in industries that generate safe products like furniture may be less sensitive to ethical information than people who work in industries that produce harmful products like narcotics. Thus, depending on the industry, recognition,

judgment, and ethical aim will vary. No study shows the size of the organization has no substantial impact on ethical recognition, and other studies show that ethical judgment and purpose have no bearing on how ethical decisions are made (Hwee, 2002); (Roozen, 2001); (Shafer, 2001); (Vitell, 2002). (Shafer, 2008) asserts that there have been no significant findings on the impact of industry type on moral judgment. (Shafer, 2008) concluded that the type of industry has little to no influence on the stage of the ethical aim. All of the studies he has conducted assert that the size of the organization has a positive impact on the ethical goal (Sweeney, 2010); (Marta, J. K. M., Singhapakdi, A., & Kraft, K. , 2008), but only one study has focused on the ethical judgment and found that there is a favorable correlation between these two elements (Sweeney, 2010). Additionally, two studies have been done on the relationship between industry type and the process of making ethical decisions, and they found that this factor has a significant impact on people's ability to make moral decisions. As can be seen, the contemporary study indicates a substantial correlation between components, in contrast to earlier empirical research which does not demonstrate any meaningful outcomes.

METHODOLOGY

The applied model, hypotheses, and the research instrument

What effect do organizational characteristics have on Kosovo's certified accountants' ability to make ethical decisions? Is the paper's main research question after a review of the literature? Fourth hypotheses have been suggested to examine the influence of individual factors and the decision-making process: H1. The type of industry has no appreciable influence on how ethical decisions are made. H2: The size of the organization has little impact on how ethical judgments are made. H3: The process of making ethical decisions is significantly impacted by the existence of an ethics code. H4. The ethical decision-making process is significantly impacted by the ethical climate.

Source: By authors (2022)

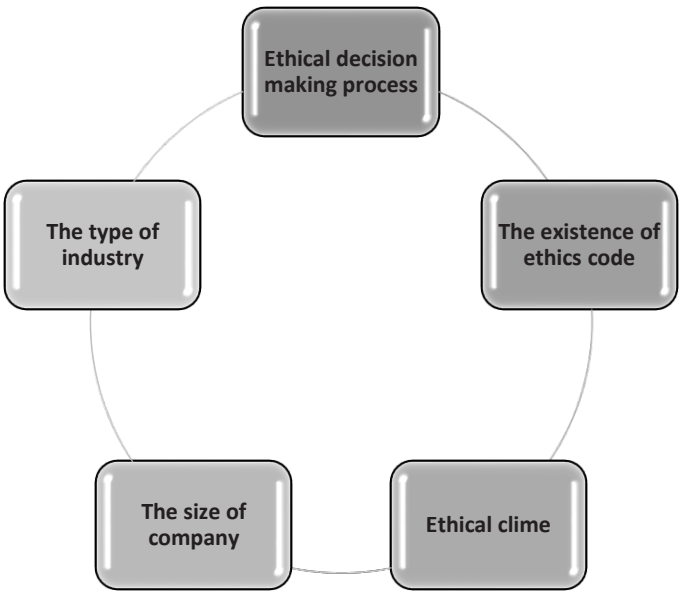

Figure 1: Research model

Based on the Rest et al. (1986) model, a questionnaire was utilized as the research instrument in this study. This model has four stages: a) ethical recognition; b) ethical judgment; c) ethical goal; and d) ethical behavior. The ethical decision-making process was substituted for it as an independent variable, while organizational aspects including gender, age, education, and experience levels were added as other independent variables. The questionnaire includes four independent variables, including the existence of an ethics code, the ethical climate, the size of the organization, and the type of company, as well as the three stages of the process: ethical recognition, ethical judgment, and ethical goal. The questionnaire has undergone testing and validation. The Cronbach's Alpha for this questionnaire (50 items) is 86.3%, according to reliability statistics.

Table 1. Reliability statistics for the questionnaire

Source: By authors (2022)

Cronbach's Alpha	N of Items
.863	50

Participants and data analyzing

162 certified accountants in Kosovo had their emails pulled from the ministry of finance, labor, and transfers website, and 131 of them responded to the questions. Every member of the population has an equal chance of being chosen because the sample used to collect the data was random. Throughout the Covid19 period, the survey was administered through email. The SPSS 23 application is used to examine the data. Descriptive statistics, an independent samples t-test, an ANOVA, and a linear regression are the analyses employed in this work.

The study limitations

This essay has a restriction, too. This study's environment in Kosovo was relatively constrained, and only a small number of organizational characteristics had an overall impact on the way ethical decisions were made. It is important to investigate how other aspects, such as the moral intensity of the individual, other accountants, or other participants who are a part of various businesses in Kosovo or other nations, may influence the way ethical decisions are made.

RESULTS AND DISCUSSION

Respondent profile

The information in the table above displays the participants in this research's industry type. Forests and weighing make up 1 person, or 0.7% of all participants in this study, from industry and agriculture. 2.5% of the participants in this study, or 2 persons, responded to the mining and quarrying business. Six respondents, or 4.5 percent of all participants, were from the production industry. There are 8 participants, or 6.1% of all participants, from the construction business. 23 participants, or 17.5% of those who participated in the study, came from the business sector. 3.2% of the participants in this study, or 3 people, provided responded tools and storage industry. Of the total participants in this study, 2 people—or 1.5%—were from the lodging and food service industries. 3.2% of the participants in this study who responded were from the information and communication industry. 83 respondents, or 63.8% of the study's participants, came from the other services sector.

Table 2. Industry type of participants

Source: By authors (2022)

Type of industry					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agriculture, forestry, and fishing.	1	.7	.7	.7
	Mining and quarrying	2	1.5	1.5	2.2
	Produce	6	4.5	4.5	6.7
	Construction	8	6.1	6.1	12.8
	Commerce	23	17.5	17.5	30.3
	Transport and storage	3	2.2	2.2	32.5
	Accommodation and food service	2	1.5	1.5	34.0
	Information and communication	3	2.2	2.2	36.2
	Other services	83	63.8	63.8	100.0
	Total	131	100.0	100.0	

Table 3 displays the findings based on the number of employees. According to the data, 13 participants, or 9.9% of the total research participants, responded that 1-4 workers. 18 participants, or 13.7%, said that their business employs between 4 and 9 people. 76 people, or 58.0% of the total research participants, selected option 10-49 workers. 24 participants, or 18.4% of those who took part in the study, selected the option for companies with 50 or more employees. According to the data in the table above, the choice for employees aged 10-49 represents the biggest percentage of workers.

Table 3. Number of employees in the companies of participants

Source: By authors (2022)

Number of employees in the company					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-4	13	9.9	9.9	9.9
	4-9	18	13.7	13.7	23.6
	10-49	76	58.0	58.0	81.6
	50+	24	18.4	18.4	100.0
	Total	131	100.0	100.0	

Table 4 are presented 131 participants who answered that they have a code of ethics guidelines or 100.0 out of the total number of participants in this research.

Table 4. Existence of a company code of ethics

Source: By authors (2022)

Code of Ethics					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	131	100.0	100.0	100.0
	No	0	.0	0.0	100.0
	Total	131	100.0	100.0	

The results of descriptive analyzes that are related to the employment of certified accountants in enterprises by type of industry are presented in table 5. The most of participants in a total of 83 certified accountants are employed in other types of industry, followed by commercial, service, and other enterprises.

Table 5. Data of employee research participants by type of industry

Source: By authors (2022)

Descriptive							
Ethical decision-making process							
					95% Confidence Interval for Mean		
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Ma
Agriculture, forestry, and fishing.	1	123.0000	.	.	.	.	123.00	
Mining and quarrying	2	84.0000	33.94113	24.00000	-220.9489	388.9489	60.00	
Produce	6	110.0000	26.48018	10.81049	82.2108	137.7892	64.00	
Construction	8	104.5000	20.79148	7.35090	87.1179	121.8821	80.00	
Commerce	23	108.0455	17.88715	3.81355	100.1147	115.9762	69.00	
Transport and storage	3	99.6667	24.58319	14.19311	38.5986	160.7347	72.00	
Accommodation and food service	2	131.5000	21.92031	15.50000	-65.4462	328.4462	116.00	
Information and communication	3	116.3333	7.63763	4.40959	97.3604	135.3062	108.00	
Other services	83	104.6747	16.60672	1.82282	101.0485	108.3009	57.00	
Total	131	105.8692	18.08052	1.58577	102.7318	109.0067	57.00	

The data in the table above are presented as the homogeneity test of variances in the type of industry. The data show that the results of Levene Statistical is = 1.116 and the value p = .358.

Table 6. Results of homogeneity test of variance on industry type

Source: By authors (2022)

Test of Homogeneity of Variances			
Ethical decision-making process			
Levene Statistic	df1	df2	Sig.
1.116[a]	7	121	.358

a. Groups with only one case are ignored in computing the test of homogeneity of variance for ethical decision-making process.

Table 7 are presented the results of the ANOVA analysis to show the significance between the Type of industry to the Ethical decision-making process. The value of F results is 1.304 and the corresponding p-value is given as <.248. Referring to the results, we can say that the type of industry has no significant impact on the ethical decision-making process of certified accountants in Kosovo.

Table 7. ANOVA results for industry type

Source: By authors (2022)

ANOVA[a]

Ethical decision-making process	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3347.772	8	418.472	1.304	.248
Within Groups	38823.005	123	320.851		
Total	42170.777	131			

The data in the table above were used to analyze the second hypothesis presented in this research. In companies that have 1-4 employees the average is M = 102.46, the standard deviation is SD = 28.52, the minimum is 58.00 and the maximum is 146.00. In companies that have 4-9 employees the average is M = 106.83, the standard deviation is SD = 17.91, the minimum is 61.00 and the maximum is 147.00. In companies that have 10-49 employees the average is M = 105.72, the standard deviation is SD = 17.20, the minimum is 57.00 and the maximum is 143.00. In companies that have 50+ employees the average is M = 107.45, the standard deviation is SD = 14.47, the minimum is 71.00 and the maximum is 163.00.

Table 8. Data of employees on the size of the company

Source: By authors (2022)

Descriptive

Ethical decision-making process

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
1-4	13	102.4615	28.52080	7.91025	85.2266	119.6965	58.00	146.00
4-9	18	106.8333	17.91894	4.22353	97.9225	115.7442	61.00	147.00
10-49	75	105.7200	17.20430	1.98658	101.7616	109.6784	57.00	143.00
+50	24	107.4583	14.47330	2.95435	101.3468	113.5699	71.00	136.00
Total	130	105.8692	18.08052	1.58577	102.7318	109.0067	57.00	147.00

a. Warning: Between-component variance is negative. It was replaced by 0.0 in computing this random effect measure.

According to the test of homogeneity of variance on the Ethical decision-making process by the size of the company, the data show that the results of Levene Statistical is = 3.725 and the value p = .013.

Table 9. Results of the variance homogeneity test on the size of the company

Source: By authors (2022)

Test of Homogeneity of Variances

Ethical decision-making process

Levene Statistic	df1	df2	Sig.
3.725	3	126	.013

The table above presents the results of the ANOVA analysis of variance to show the significance between the Size of the company to the Ethical decision-making process. The value of F is .230 and the corresponding p-value is given as <.875. The result shows that the size of the company has no significant impact on the ethical decision-making process of certified accountants in Kosovo.

Table 10. ANOVA results on the size of the company

Source: By authors (2022)

ANOVA[a]

Ethical decision-making process	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	229.968	3	76.656	.230	.875
Within Groups	41940.809	128	332.864		
Total	42170.77	131			

The data presented in table no.11 are used to analyze the significance between the code of ethics and the ethical decision-making process of certified accountants in Kosovo. The data show that the t-test value is t (148) = .003 (p <0.05). According to the results of the t-test, we affirm that the existence of an ethics code has a significant impact on the ethical decision-making process of certified accountants in Kosovo.

Table 11. Independent Samples Test Results for Existence of Code of Ethics

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Ethical decision-making process	Equal variances assumed	1.518	.220	3.007	148	.003	3.53846	1.17655	1.21345	5.86347
	Equal variances not assumed			3.065	145.606	.003	3.53846	1.15445	1.25681	5.82011

The data in the table above were used to analyze the ethical climate of the ethical decision-making process of certified accountants in Kosovo during the Covid19 period. In the option the interest of the organization, the average is M = 110.50, the standard deviation is SD = 4.949, the minimum is 107.00 and the maximum is 114.00. In the option Social Responsibility, the average is M = 113.00, the standard deviation is SD = 8.485, the minimum is 107.00 and the maximum is 119.00. In the option Laws and professional code, the average is M = 112.00, the standard deviation is SD = 5.656, the minimum is 108.00 and the maximum is 116.00.

Table 12. Data on ethical clime of the companies

Descriptive								
Ethical decision-making process								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
The interest of the organization	78	110.500	4.94975	3.50000	66.0283	154.9717	107.00	114.00
Social responsibility	13	113.000	8.48528	6.00000	36.7628	189.2372	107.0	119.00
Laws and professional code	40	112.000	5.65685	4.00000	61.1752	162.8248	108.00	116.00
Total	131	106.2479	17.71903	1.638212	103.6610	115.3946	61.00	143.00

Table 13. Results of the variance homogeneity test on the ethical clime

Test of Homogeneity of Variances

Ethical decision-making

Levene Statistic	df1	df2	Sig.
.931	20	80	.851

The table above presents the results of the ANOVA analysis of variance to show the significance between the Ethical clime of companies to the Ethical decision-making process. The value of F is .299 and the corresponding p-value is given as <.004. The result shows that the ethical clime of the company has a significant impact on the ethical decision-making process of certified accountants in Kosovo.

Table 14. ANOVA results on the ethical clime of companies

ANOVA[a]

Ethical code	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	11041.056	36	306.696	.299	.004
Within Groups	25378.756	80	317.234		
Total	36419.812				

CONCLUSIONS AND RECOMMENDATIONS

The study demonstrates that organizational characteristics have a substantial influence on Kosovo's certified accountants' ability to make moral decisions. This is very dependent on the working environment. The following organizational aspects have been considered: Industry, Company Size, Ethics Code Presence, and Ethical Climate. Data processing demonstrates that the existence of an ethics code and an ethical environment have an impact on the ethical decision-making process, however, the kind of industry and the size of the organization have no bearing. Codes of ethics are legal documents that must be abided by, and this indicates that businesses that have them also have an impact on how ethically sound decisions are made. The ethical climate, which has to do with law and behavior within the company, is the other significant component. The three different ethical contexts used in the study have a big impact on how Kosovo's accountants make ethical decisions. Companies are therefore recommended to pay attention to the Code of Ethics and how it is being applied. All businesses should be required to develop and apply a code of ethics, according to the government. An ethical climate must be developed for employees to have a clear understanding of how to behave at work. Education institutions and professional organizations are in charge of educating ethical accountants, and business management are in charge of choosing and employing this group. An honest accountant is always at the heart of a flourishing company. To make ethical decision-making more sustainable, it is advised that firms hire ethical officers and that certified accountants who break company ethics policies are identified and denied licenses. Additional research should be done to examine the impact of other variables, such as the

individual and moral intensity elements of these, other accountants, or other players in various enterprises in Kosovo or other nations, on the process of making ethical decisions.

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