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LITERATE THOUGHT: A COMMENTARY

Editorial

Peter V. Paul

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ABSTRACT

A number of d/Deaf and hard of hearing students, as well as other students in special education programs, have difficulty accessing academic content information that, traditionally, has been presented in written language in print and electronically (e.g., textbooks, other school materials, etc.). Because this information represents what students need to know, there will be a large gap in their knowledge base, and students will not have ample opportunities to develop a high level of literate thought. That is, students will not be able to represent and manipulate information, solve problems, or develop other higher-level critical thinking skills. This article presents a case for the reconceptualization of literacy—namely, a broadening of our traditional notion of literacy as being able to read and write a written language. This reconceptualization, emphasizing literate thought, requires a discussion of types of literacies and an understanding of constructs such as access and interpretation, illiteracy, and listening comprehension. Also discussed is the intertwinement of literate thought and Universal Design for Learning. The article concludes with questions for further exploration and dialogue.

Keywords: *d/Deaf and hard of hearing, literacy, literate thought*

For most educators and government officials, there seems to be little doubt that it is critical for citizens to possess *adequate* print literacy (reading and writing) skills, especially for academic and post-school success in societies that are predominantly dependent on technology and print (e.g., see discussions in Ellsworth et al., 1994). What it means to possess adequate proficiency is debatable, but it seems to be much more than just having functional print literacy skills (Paul & Wang, 2012). In fact it could be argued that possessing critical literacy skills is necessary for meaningful participation in the social, economic, and political institutions of society. These skills are or should be reflective of an informed citizenry.

This begs a line of questions: What is meant by critical literacy skills? Is this merely the ability to read and write at a proficient level? Are critical literacy skills only connected to the ability to read and write? Are reading and writing, however defined, the only avenues for the development of higher-level critical thinking skills?

The above list of questions is motivated by the persistent challenges faced by d/Deaf and hard of hearing students, indeed by a number of other special

education students as well, to develop critical print literacy skills that are commensurate with those of typical literacy learners. A number of American d/Deaf and hard of hearing (d/Dhh) learners, especially those with bilateral moderate-severe to profound hearing losses, have not achieved English print literacy outcomes commensurate with their typical literacy peers by the end of their formal education period or the completion of high school (Allen, 1986; Paul et al., 2013; Qi & Mitchell, 2012; Trezek & Mayer, 2019).

A few scholars have asserted that the reading/literacy levels have improved somewhat for d/Dhh learners, most notably for individuals who have benefitted from early intervention and the use of cochlear implants (e.g., Archbold, 2010, 2015; Easterbrooks & Beal-Alvarez, 2012; Mayer et al., 2016; Mayer & Trezek, 2018). Nevertheless, many of these students still experience a slow growth in reading/literacy achievement (less than a half grade level per academic year) and continue to have difficulty accessing the academic content information in academic texts, literature, and other school materials in print on paper or available electronically.

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Because academic content is delivered mostly via the written word, a number of children and adolescents will lag in their acquisition of relevant knowledge. Difficulties with the academic language associated with academic content impede their ability to solve problems or develop other higher-level critical thinking skills often associated with subjects such as, for example, science or history.

The main objective of this article is to argue that the construct *literate thought* should be seriously considered as the predominant educational goal for d/Dhh students, indeed for all students. Briefly, literate thought is the ability to think creatively, critically, logically, and rationally (Paul & Wang, 2012). This construct embodies the critical literacy skills, which should be paraphrased as critical literate thinking skills. However, this embodiment requires a reconceptualization of the traditional notion of literacy (discussed later), recognizing that there are various types of literacies as indicated by the field called the New and Multiple Literacies (e.g., Paul & Wang, 2012; Tyner, 1998).

Literate thought is also related to the major principles of Universal Design for Learning (UDL; Coyne et al., 2012; Hartmann, 2011; Rose & Gravel, 2010). In essence, d/Dhh students might need alternative or additional modes for accessing information to develop complex, critical literate thinking skills. Research on these alternative modes might be discouraged by current traditional beliefs and immense attention regarding the merits of print literacy skills for obtaining proficiency on state-wide achievement tests, especially in the United States (Butler & Stillman, 2002; Calfee, 1994). It is important to not permit the inaccessibility of print literacy skills for a number of students to interfere with the acquisition of knowledge and critical thinking skills.

With respect to the above discussion, the plan for the rest of the present article is as follows. First, the construct literate thought is elaborated and contextualized within a pair of concepts, listening comprehension and reading comprehension. With this background, it is argued that traditional literacy (reading and writing) should be reconceptualized. This leads to a rendition of types of literacies for d/Deaf and hard of hearing students with respect to another pair of concepts, access and interpretation. Subsequently, literate thought will be related to Universal Design for Learning (UDL), particularly the various modes of representations of information (Coyne et al., 2012; Hartmann, 2011; Rose & Gravel, 2010). The present article also provides perspectives on the terms, literate and illiterate. Finally, the concluding section provides a summary and proffers questions for further exploration and dialogue.

Literate Thinking Skills

Literate thought, or literate thinking skills, is not a stream of consciousness or a case of random thinking. It is an entity that is highly organized and goal-directed for solving problems, comprehending and applying information, or constructing learned outputs such as answering questions or composing articles, books, essays, or poetry (Paul & Wang, 2006, 2012).

In one sense, the literate thinking skills of literate thought embody metacognitive skills (e.g., see discussions in Calfee, 1994; Israel, 2007). However, it is argued that literate thought is broader than metacognition because it entails, in part, the use of creative, critical, and imaginative thinking aspects as well as the representations and manipulations of the outcomes or products in memory.

Literate thought has also been compared to the construct, comprehension (Paul & Wang, 2012). Comprehension is often described as a paradigm for cognition (Kintsch, 1998)—that is, cognitive skills or strategies are utilized for representing and understanding information. Nevertheless, literate thought embodies comprehension and metacognition and, in this sense, it can be stated that literate thought might be a more accurate paradigm for cognition.

As mentioned previously, literate thinking skills have been often associated with the traditional notion of literacy, that is, the ability to read and write at a proficient level (e.g., see Calfee, 1994; Olson, 1986, 1989, 1991, 1994). Throughout the present article, it is argued that literate thinking skills can and should be developed in the through-the-air (i.e., use of conversational or colloquial language) and “captured” modes (e.g., print, Braille, and even non-print modes via the use of audiobooks or sign books).

Consider the following passage from Olson (1994):

All thinking involves perception, expectancies, inference, generalization, description, and judgment. Literate thought is the conscious representation and deliberate manipulation of those activities. Assumptions are universally made; literate thought is the recognition of an assumption as an assumption.... Even if literate thought is to a large extent ordinary thought rendered self-conscious and deliberate it is not tied exclusively to the practice of reading and writing. Literate thought can be, indeed is to some degree, embedded in the oral discourse of a literate society. We can talk of conjectures just as well as read and write about them. Literate thought is not restricted to the medium of writing even if writing and reading were critical in their evolution. (pp. 280-281)

The above passage implies, at least, that proficiency in traditional literacy (reading/writing) is not necessary for the development of literate thinking skills or literate thought. Oral discourse, often called oral or through-the-air literacy, is or can lead to the development of literate thought, especially within a society that is embedded in the use of the written word. Of course, there may be differences in oral discourses between print societies and non-print societies—that is, societies with no written language (e.g., Ong, 1982; Rubin, 1995). These differences do alter the construction of literate thought—but that topic is beyond the scope of the present article.

Previously, it was mentioned that literate thought is or can be a paradigm for cognition. In essence, literate thought entails the cognitive representations of information and manipulations of the contents in organized and goal-directed activities. Such information can also include the contents of personal and social interactions and discussions. Thus, as implied by Olson (1994), literate thought can be developed in the through-the-air or captured mode (for further discussion, see Paul & Wang, 2012).

Another way to state this: Literate thought is mode-independent; it is not restricted to a particular delivery mode of presenting information. Ultimately, it could be asserted that no particular delivery mode of information should be privileged. This implies that the quality and quantity of information is roughly similar, in spite of nuances, in all delivery modes (e.g., through-the-air, print, Braille, audio books, sign books). Such an assertion requires additional research; however, there is sufficient research for the importance of literate thought in the through-the-air mode, which is associated with listening comprehension, discussed in the ensuing paragraphs.

Listening Comprehension/Reading Comprehension

To build on the above mode-independent assertion, this section focuses on listening comprehension and reading comprehension, particularly as this pair relates to the concepts, colloquial and academic language. It should be possible to address two questions: (1) Does it matter whether one can comprehend a passage via reading or via listening (or viewing/watching as in a sign language), and (2) Do the listening/reading comprehension constructs reveal insights into the requirements for the mode of captured information (e.g., print versus non-print)?

Comprehension is difficult to define, but there is agreement that there are various levels within a print text or across texts or across through-the-air dialogues and conversations (e.g., Kintsch, 1998; Paul & Wang, 2012). It might be that listening comprehension is not as complex as reading comprehension (for written language). It is tempting to associate listening comprehension with the use of colloquial language, often used in face-to-face or through-the-air social interactions. On the other hand, reading comprehension is often associated with academic or literate language. In general, when compared to colloquial language, academic language in school subjects contains more complex language structures and lexical diversity as well as dense topics and explanations (e.g., see Fang et al., 2006; Snow & Uccelli, 2009). Despite the differences between colloquial and academic language, it has been argued that students need to develop a level of competency in the colloquial (or through-the-air) form of a language in order to attain proficiency in the academic form of that language found in learned materials (e.g., see Mayer, 2009; Paul et al., 2013).

For our purposes here, it is also argued that listening (or viewing/watching) comprehension can be associated with either colloquial or literate/academic language. It depends on the genre or the content of the information—not necessarily the mode of delivery (Paul & Wang, 2012).

For example, consider situations where students are listening to an audio book, which is a translation of an academic text, or to a learned lecture in the classroom. It should be clear that both of these instances require adequate listening comprehension skills for academic or literate language, assuming that students already possess a level of skill in the colloquial use of the same language.

It also is important to describe what is meant by “listening.” Consider the passage by Sticht and James (1984):

D. P. Brown, a blind educator, completed his doctoral dissertation 30 years ago at Stanford University. In it, he analyzed relationships among oral and written language skills.... He argued that listening to and comprehending spoken language is different from listening to nonlanguage sounds, which is something the prelanguage infant can do. He argued that, just as reading is not called looking, though it certainly involves looking while processing language symbols, listening while processing language signals should not be called merely listening. Listening, so he argued, is a parallel term to looking, and it causes confusion to have the term also serve as the oral language counterpart to reading. So he coined the term *auding* to refer to the process of listening to language and processing it for comprehension. (p. 293)

So, “listening” is not really the counterpart for “looking” in reading, but rather is “parallel” and involves language comprehension (and other skills). This type of language comprehension is analogous to reading comprehension; indeed it is necessary for reading comprehension—at least according to the *Simple View of Reading* (SVR) theory (Hoover & Gough, 1990). This theory, supported by a robust line of research, asserts that reading comprehension equals decoding + listening/language comprehension. That is, both decoding and listening comprehension are necessary for reading comprehension.

In essence, it should be possible to facilitate the development of comprehension skills, such as making inferences, drawing conclusions, obtaining the main idea, and so on, via listening or auding in a particular genre (fiction, non-fiction). This can result in a transfer of the skill from through-the-air to print reading, once the learning-to-read stage has been completed. Thus, auding (listening) and print reading represent alternative paths to shared language competencies and cognitive content. And, auding and reading present reciprocal developmental interactions—each influences the other.

It should not be surprising that auding/listening comprehension is higher than reading comprehension until students can read to learn (occurs after the learning to read stage). During the reading-to-learn stage, students’ comprehension levels of auding/listening and reading are equal (e.g., Butler & Stillman, 2002; Kamhi & Catts, 2012; Paul & Wang, 2012; Sticht & James, 1984).

It should be added that reading comprehension cannot exceed aural/listening comprehension. Finally, there is ample evidence that listening comprehension is a strong predictor of reading comprehension.

If the complexity of listening (or viewing/watching) comprehension is accepted, it can be argued further that reflecting on and manipulating the through-the-air information captured on CD or DVD is also complex (Paul & Wang, 2012). Of course, the skills required for developing listening comprehension are different from those required for reading comprehension. However, the contents of academic audiobooks (or sign books) can be just as difficult to understand as those delivered in print books. As mentioned previously, students still need a level of competency in the colloquial use of language in order to access or acquire academic language. This is true regardless of whether the academic language is delivered through-the-air or captured in print or in non-print modes. Developing literate thought via the use of audio- or sign books is possible and might be a viable alternative (or an addition) to developing literate thought via print books.

Types of Literacies and Access/Interpretation

To continue with the reconceptualization of literacy, this section discusses types of literacies and the access/interpretation concept. Only two broad types of literacy are briefly discussed here: print and performance (oral or signed) (see Paul, 2018; Paul & Wang, 2006, 2012, for a detailed discussion of these types plus caption literacy). Each type of literacy has access and interpretation requirements.

Print literacy embodies information that has been captured on paper or electronically via the use of a written language system (e.g., letters, characters, symbols). To access print, readers need skills related to word identification (decoding) as well as knowledge of the language of print (often labeled listening or language comprehension). Critical print interpretation skills refer to the skills of answering questions or retelling or making inferences, involving prior knowledge and metacognition (e.g., Alvermann et al., 2013; Israel, 2007; Israel & Duffy, 2009). Thus, readers cannot interpret or manipulate the print information if they do not have adequate access skills. Of course, adequate access skills do not guarantee print comprehension, especially if readers do not have adequate prior knowledge or metacognitive skills.

Performance has two delivery aspects—it can be delivered through-the-air or captured in audio- or sign books and may involve a variety of genres from dinner conversations to classroom lectures to the oral reading or signing of information in books and other academic materials. The captured performance information does not contain print. The uncaptured through-the-air form may be less demanding linguistically and cognitively than the captured form; however, this depends on the genre. Regardless, there are demands on memory if one listens to a story through-

the-air, compared to having the ability to “replay” the story on a CD or DVD or via a streaming option. Access skills involve “focused” listening and/or viewing/watching, and if the information is comparable, interpretation of the performance aspect is roughly similar to that of print literacy. The influence of other factors such as the prosodic features of a speaker’s voice or signing can be found elsewhere (Paul & Wang, 2012).

This reconceptualization of literacy, entailing types of through-the-air and captured literacies, calls into question the traditional view of “illiteracy”. Illiteracy is traditionally associated with the ability to access and understand written information in print. Thus, individuals are considered illiterate if they cannot access and understand such information. The discussion in the present article thus far implies that individuals are literate if they can access and interpret (e.g., comprehend, apply) learned (e.g., scholarly, academic) information either through-the-air or in captured modes (e.g., print, braille, audio- or sign books). So, it is possible for an individual to be print illiterate, but not illiterate with respect to aural or view/watching. In addition, one can be literate in the aural or viewing/watching mode, but not in the print or written mode. In essence, access in a particular delivery mode (e.g., through-the-air, print, non-print) can lead to, but not guarantee, comprehension or interpretation. Students may need to be taught strategies for improving their comprehension skills.

As argued by Paul (2018):

What does it mean to be illiterate? Historically, the concepts literate and illiterate have been associated with print literacy. If a person was considered literate, this meant he or she could access and interpret information captured in the print or written mode. If a person was labeled illiterate, he or she could not access and interpret information captured in the print mode at a certain literacy level (e.g., functional literacy).

With the reconceptualization of literacy, this question needs to be reframed: Illiterate with respect to what? Print? Braille? Sign? A through-the-air form of a language—speaking or signing? If individuals are print illiterate, despite our best educational efforts, should we attempt to develop literacy in a different mode? Better yet, should we facilitate access to more than one mode of literacy in educational settings throughout compulsory education? Taking this route might address the issues of accessibility and equity. (p. 83)

At the least, this reconceptualization of literacy asserts the need for educators to consider multiple means of representation and delivery of information for instruction, curriculum, and assessment, which brings up the notion of Universal Design for Learning (UDL), as discussed in the ensuing section.

Literate Thought and UDL

To understand the connection between literate thought and Universal Design for Learning (UDL), brief background information on UDL needs to be presented. The concept UDL emerged from the early legislation in the United States involving civil rights and special education (Coyne et al., 2012; Hartmann, 2011; Rose & Gravel, 2010). In the late 1980s, researchers at the Center for Applied Special Technologies (<https://www.cast.org/>) envisioned and incorporated advances from three conceptual movements: advancements in architectural design, developments in education technology, and discoveries from brain research. The framework for UDL was organized around three broad principles that guide the development of instruction, curriculum, and assessment. This framework provided an inclusive and accessible learning environment for all learners, including learners with disabilities and those who are limited speakers of a verbal or spoken language.

The three UDL principles are:

1. Provide multiple means of representation; namely, offer a variety of and flexible ways to deliver information.
2. Provide multiple means of action and expression; that is, flexible options for learning styles and demonstrations/expressions of knowledge.
3. Provide multiple means of engagement; namely, flexible options for generating and sustaining motivation and interest.

Although literate thought can incorporate all three UDL principles, it is most directly connected to the first one—providing multiple means of representations. This can be seen in the discussion of various types of literacies, which are characterized as delivery modes of information. The other two UDL principles can also be applied in developing literate thinking skills in the through-the-air or captured mode. In fact, all three UDL principles are relevant for facilitating the acquisition of the three broad requisites for critical literate thinking skills: (1) adequate proficiency in a bona fide language; (2) representing and manipulating a metalanguage—that is, a specialized vocabulary of a discipline or topic or area, and (3) possessing the ability to access and interpret academic or literate language (Paul & Wang, 2006, 2012).

UDL involves or should involve the use of multimedia, for example, computerized instruction or presentation of information and so on. Research on educational media and deafness in the United States has a long tradition, particularly via the convening of several annual conferences (e.g., see discussion in Paul, in press). Educational media has been utilized with d/Dhh students for a number of academic areas, especially for the teaching of language and literacy skills in the USA and other countries (e.g., Adnyani et al., 2021; Gentry et al., 2004/2005; Golos & Moses, 2013; Nikolarazi et al., 2013; Saddhono et al., 2019).

It can be argued that UDL is a tool for developing literate thinking skills as well as an avenue for facilitating the acquisition of knowledge.

Both literate thought and UDL defy the one-size-fits-all paradigm. Focusing on concepts such as accessibility, flexibility, and accommodations among others, UDL in conjunction with literate thought acknowledge the need to differentiate instruction, curriculum, and assessment. This should increase motivation and engagement—critical factors in the learning processes of students.

CONCLUDING REMARKS

In the present article, it is argued that literacy should be reconceptualized with a focus on types of literacies and the development of access and interpretation skills associated with a particular type. This reconceptualization, in conjunction with Universal Design for Learning and the use of technology, offers multiple paths for developing high-level critical literate thinking skills in children and adolescents who have been struggling with print literacy. Indeed, a number of these individuals might prefer alternatives to or, at least, additional options than print (e.g., see Wang & Al-Said, 2014). It might also be the case that a fixed medium such as print is not sufficient, by itself, for meeting the complex challenging needs of a diverse society (e.g., see various chapters in Ellsworth et al., 1994; Paul & Wang, 2012). The use of alternative or additional delivery modes might be a viable process for promoting diversity and inclusiveness and for mitigating factors that impede the development of cognition. Practically, this should address the need to differentiate instruction, curriculum, and assessment for students.

Literate thought should be considered as a paradigm for cognition. The ability to think creatively, critically, logically, and rationally can be developed in non-captured (i.e., through-the-air, speaking, signing) and captured (e.g., print, Braille, audio- sign books, etc.) venues. With respect to access and interpretation, it is shown that the relationship between a specific captured mode and its non-captured counterpart is reciprocal and facilitative. In addition, to access and interpret academic information in the through-the-air mode requires an adequate level of competency in the colloquial usage of a language. Proficiency in the colloquial usage is necessary for the acquisition and development of academic language, found in learned materials.

There are still a few questions that should be considered and researched (Paul, 2018; Paul & Wang, 2012). For example:

- Is it cost effective and realistic to convert all learned information available in print to alternative non-print modes? [Some conversions are required by law in the United States.]
- What are the issues of converting learned information available in one language (such as English, etc.) to print and non-print modes involving other languages, spoken in a particular country? Should this be considered with respect to the growing populations of students who are limited speakers of the language of the majority or dominant culture?

- Is competency in non-print modes (audio- and sign books) only sufficient for participation in scientific, technological societies that are predominantly dependent on the written word?
- What are evidence-based practices for developing literate thought in any delivery mode?

The above list of questions is, obviously, not exhaustive. In closing, it is incumbent on educators and researchers to focus on the acquisition and development of literate thought—which should be the main or predominant goal in the education of d/Deaf and hard of hearing students, indeed for all students.

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GENDER ANALYSIS AND COVID-19: A CASE STUDY OF ECONOMIC (IN)EQUALITY

Original scientific paper

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ABSTRACT

This paper provides an overview and critical review of the question of whether and to what extent has the coronavirus pandemic affected the economic situation of women. The case study in Bosnia and Herzegovina identified the key concepts that will guide our analysis and interpretation. Based on our experiences, we examine and investigate the economic and social status of women in general, and then monitor economic and social parameters during the coronavirus pandemic, to answer the key question- whether the pandemic caused more damage to men or women in economic terms, did it emphasize and deepen the existing gender gap in economic and social terms, or did it improve the position of women, which we consider less likely. This is a predominantly quantitative approach, given that we collected, compared, and analyzed various statistical data from the census, statistics from labor and employment agencies on the labor market, and similar. Using the compilation method we collected all relevant statistical data for research, and then relied on content analysis and comparison to draw key conclusions. Also, using the compilation method we collected various media reports related to the topic. Where there was a need for additional sources we used the interview as a qualitative method, where we relied on the experience of employment agencies, as well as non-governmental organizations dealing with gender equality issues in Bosnia and Herzegovina. Even though numerous studies have shown that the Covid-19 pandemic had a disproportionate impact on women, our research confirms that official statistics in Bosnia and Herzegovina do not reveal that women are significantly more economically affected than men. The expressiveness of women affected by the coronavirus pandemic and the impact on their economic status was also given through regression analysis and its results. Taking into account only R Square and its indicator of 48%, which is not negligible, it shows the economic position of women before the coronavirus, but certainly during the pandemic. However, given that the effects of the Covid-19 pandemic risk improving existing gender inequalities, we also seek to remind the relevant institutions of their commitment to addressing gender inequalities in all aspects of society and achieving these goals more quickly through a gender-sensitive approach. This, therefore, further opens up opportunities for gender equality, the effectiveness of sustainable development goals, and the empowerment of women in all aspects of social, political, cultural, and economic life.

Keywords: *Pandemic, Covid-19, gender equality, economic status, Bosnia and Herzegovina*

INTRODUCTION

Since the very first cases of infection in the Chinese province of Hubei in December 2019, the new coronavirus has spread around the world at an alarming rate. In March 2020, The World Health Organization has declared a pandemic. At that time, there were more than 118 000 cases of infection in 114 countries around the world (World Health Organization [WHO], 2020).

On the first anniversary of the pandemic, there were more than 118 million people around the world infected with the coronavirus (Worldometers, 2020). From the very beginning, governments around the world have sought to balance protecting lives and economics. Borrowed from the English language - the (un)popular *lockdown*, has taken root in all languages around the world.

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Lockdown-partial or total, has become a way to prevent and limit interpersonal contact, and simultaneously the spread of the disease. However, all this hit economic activity the hardest. According to the World Bank, this is the “worst economic shock” since World War II, with a global GDP decline of 5.2% (World Bank, 2020). The World Bank also states that some world economies have experienced the greatest decline since the 1870s. The decline in economic activity was also felt in Bosnia and Herzegovina. According to the World Bank, the economy fell by 4% in 2020 (Hadzimusic, 2021). This country has encountered its first lockdown in March 2020, which affected various sectors- most notably tourism, hospitality, and trade, and indirectly several other activities. All this has led to tectonic disturbances in the labor market - already in April 2020. The Labor and Employment Agency recorded a significant increase in registered unemployment. The number of unemployed rose by more than 21 000, whereas employers were looking for four times fewer workers than in previous months (Labor and Employment Agency, 2020). Our research aims to examine how much the mentioned economic disturbances have affected women in comparison to men. Regardless of the coronavirus pandemic, it can be said that the position of women in Bosnia and Herzegovina is worse than that of men. Many descriptive indicators taken from various sources, at the very end of this paper will be processed in the SPSS and through regression analysis to further examine the impact of the corona pandemic on the economic situation of women in Bosnia and Herzegovina. In its Gender Equality Report on Bosnia and Herzegovina, UNICEF states: „General examples of gender inequality are most noticeable when it comes to women’s participation in public and political life, which reflects their position in society, and then their position in the labor market, which is characterized by multiple burdens on women in the market economy and care economy, there is also increased violence against women, including domestic violence. Gender equality has not yet been treated as a priority of development and other strategies, in general, and in some specific areas, and is still seen as an issue for women“ (UNICEF, 2009, p. 6).

Although the publication was made twelve years before the writing of this paper, the precisely worded passage has not lost its relevance to this day. Analyses presented later in this paper will show that women are socially, politically, and economically disadvantaged compared to men. Therefore, it is to be assumed that the coronavirus pandemic has just emphasized the existing situation. All the consequences of the coronavirus pandemic - human and material, will be seen from a historical perspective when it will be possible to tell a meta-narrative about the crisis we are living in. This paper is being written on the second anniversary of the pandemic, therefore we decided to focus on the first few months, starting from March 2020, when the authorities in Bosnia and Herzegovina introduced the first lockdown. We start our research by analyzing statistical data on demography, social, and economic characteristics of women from the 2013 census, with our analysis of legislative and executive authorities, we examine the position and representation of women in politics, and we compare economic and trade indicators before and during the coronavirus pandemic - which will lead us to the desired conclusion as to whether the pandemic has had a greater economic and social impact on women or men in Bosnia and Herzegovina.

STATISTICS ON WOMEN IN B&H: FROM THE POPULATION CENSUS

According to the last census in Bosnia and Herzegovina in 2013, there are 3.531.159 inhabitants in this country. Slightly more than half are women - 1.798.889. There are 1.732.270 men (Agency for Statistics of Bosnia and Herzegovina, 2013a, p. 25). The average age of the population is 39.5 years. Among men, the average age is 38.24, while among women it is 40.73 (Agency for Statistics of Bosnia and Herzegovina, 2013a, p. 28).

Marital status

There is a total of 2.987.440 people over the age of fifteen in Bosnia and Herzegovina. The table below shows the marital status of this population group.

Table 1. Population aged 15 and over by marital status and sex

BH	Sex	Never been married	Married	Divorced	Widowed
Total	2.987.440	810.941	1.759.134	100.880	316.485
Male	1.453.294	471.519	878.604	43.733	59.438
Female	1.534.146	339.422	880.530	57.147	257.047

Source: Agency for Statistics of Bosnia and Herzegovina, 2013b, p. 1115

The data show that most of both sexes are married and that there is little difference in the number of married men and women. There are significantly more widows than widowers. This number is approximately 4.3 times bigger for women in Bosnia

and Herzegovina compared to widowed men.¹ Statistics, when it comes to women, indicate that the highest percentage of women is of those (over 15 years of age) who have not given birth at all or those who have two children.

¹ It is obvious that the data are different and that the statistics do not provide insight into the reasons, but the authors conclude that it should be borne in mind that Bosnia and Herzegovina is a country where the effects of war are still being felt.

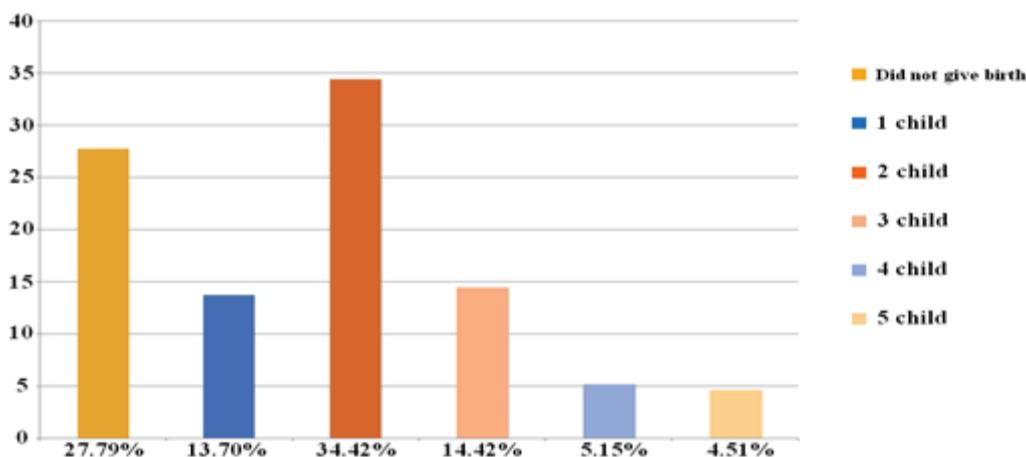


Chart 1: Female population aged 15 and over by the number of live births

Source: Agency for Statistics of Bosnia and Herzegovina, 2013b, p. 1445

The chart shows that approximately 35% of women give birth to two children and that close to 28% over the age of 15 have never given birth. The lowest is the percentage of women who gave birth to five or more

children which are close to 5%. More than 5% make women with four children. More than 14% are those who have given birth to three children.

Education

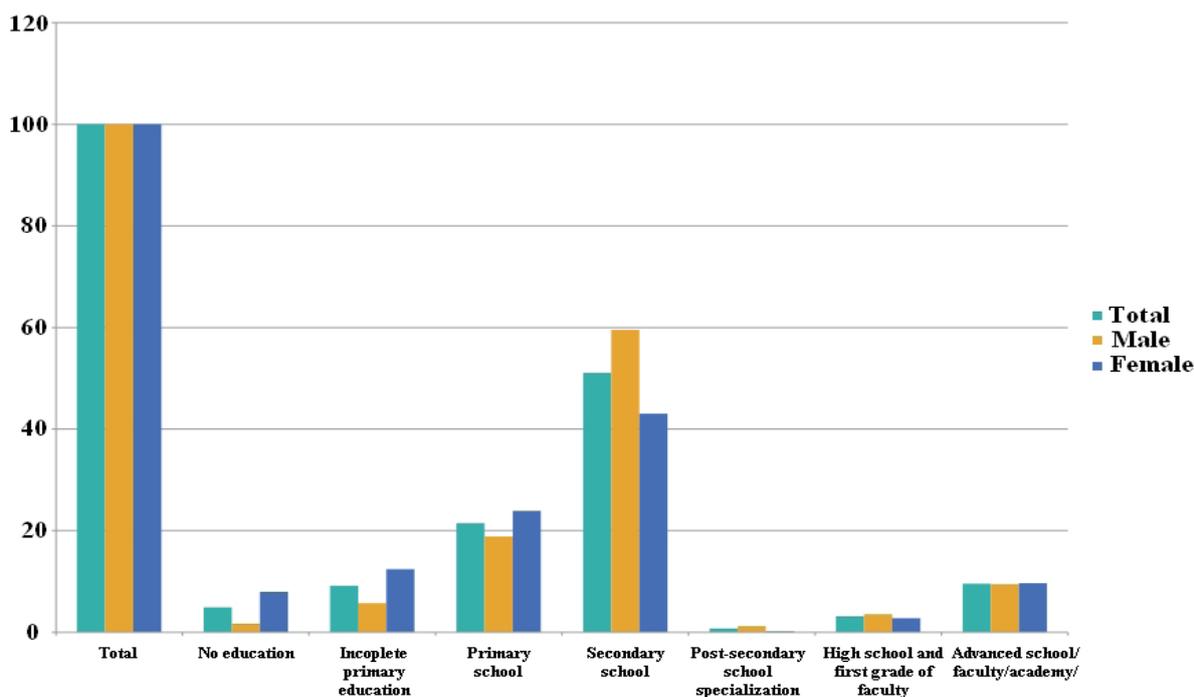


Chart 2: Population aged 15 and over by completed education and sex (5), B&H level

Source: Agency for statistics of Bosnia and Herzegovina, 2013c, p. 24

When it comes to education, statistics indicate that the level of education is higher among men than women.

The chart above clearly indicates the following negative trends for women:

- There are significantly more women than men with no education.
- The number of women with incomplete primary education is almost twice as high as the number of men.
- Significantly more men have completed secondary school.

- The number of women who complete their specialization after secondary school is almost insignificant compared to men.
- There is a larger number of men who have completed higher education, although the difference compared to women is not big.

The chart indicates two positive trends for women when it comes to education, and they are:

- More women than men finish primary school.
- There are slightly more women who finished college/ university than men.

Here is how the above data looks in numbers:

Table 2. Population aged 15 and over by completed education, age, and sex

	No education	Incomplete	Primary school	Secondary school	Post-secondary school specialization	High school and first-grade faculty	Advanced schools
Total	146.078	274.036	640.726	1.525.161	21.613	94.204	285.622
Male	24.021	83.216	274.258	864.823	17.877	51.556	137.543
Female	122.057	190.820	366.468	660.338	3.736	42.648	148.079

Source: Agency for Statistics of Bosnia and Herzegovina, 2013c, p.25

When it comes to illiteracy, statistics are devastating for women compared to men. According to the 2013 census, the share of the illiterate population of the total population is 2.82%. However, the share of men is .79%. The share of women is 4.76%. Out of the total number of inhabitants over the age of 10 (3.180.115), 89.794 are illiterate. Out of the total number of men over the age of 10 (1.551.947), 12.237 are illiterate, whereas out of the total number of women over the age of 10 (1.628.168), 77.557 are illiterate (Agency for Statistics of Bosnia and Herzegovina, 2013c, p. 138).

Economic characteristics

Below is a chart that shows the working-age population by economic activity and gender in percentages. We take this chart from the census in Bosnia and Herzegovina as an example to have a clear picture of the economic position of women before the pandemic compared to the period during it.

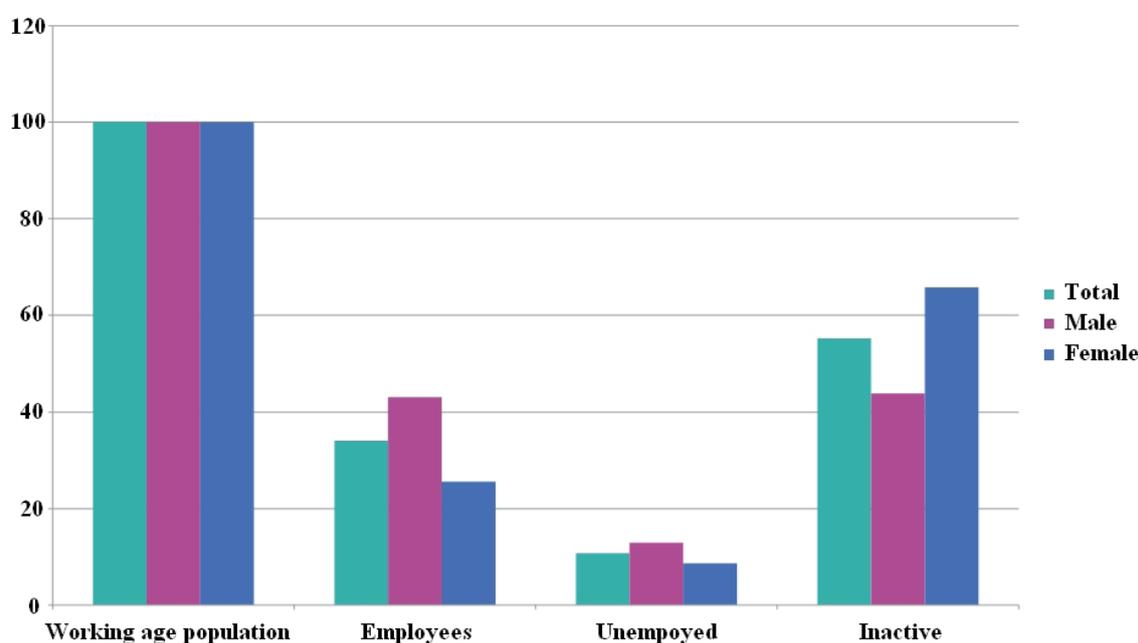


Chart 3: Working-age population by economic activity and sex (5), BH level

Source: Agency for Statistics of Bosnia and Herzegovina, 2013d, p. 326

This chart shows that in Bosnia and Herzegovina, in 2013, there were significantly more employed men compared to women. Numerically, there are more men among the unemployed, but the difference is small. There are more inactive women than men. All these differences significantly affect the economy of

the country. The report of the Gender Center of the Federation of Bosnia and Herzegovina on gender equality during the pandemic states the following: „According to the World Bank estimates, about 16% of gross national income is lost due to gender-based differences in labor force participation.

According to the global index of the World Economic Forum for 2018, only a third of the working-age population (and only a quarter of working-age women) in B&H is employed, while the employment rate of the EU-28 for 2017 was above 72%. Therefore, B&H ranks 115th out of 149 countries. With a score of .64, B&H lags behind the region, including Croatia, Slovenia, Serbia, Montenegro, and Northern Macedonia. Labor force surveys conducted in B&H show that despite active employment measures in 2018, there were 236.000 more men than women in the labor force, 208.000 more men than women in the employed population, and 294.000 more women were inactive compared to men. The situation in the Federation of Bosnia and Herzegovina is no different. In the structure of employees in March 2020, women made up only 42%, and more of them were in the structure of the unemployed (58%)“ (Gender Center of the Federation of Bosnia and Herzegovina, 2020).

WOMEN IN POLITICS

Women in Bosnia and Herzegovina are unequally represented in politics compared to men. For instance, a woman has never been a member of the Presidency of Bosnia and Herzegovina, nor has a woman ever chaired the State-level Council of Ministers. In the Federation of Bosnia and Herzegovina entity, no woman has held the post of Prime Minister. In the Republika Srpska, Zeljka Cvijanovic from the SNSD party of Milorad Dodik was elected to the position of entity president in 2018, and at the time of writing this paper, her term is ongoing. In the previous election cycle 2014-2018, Cvijanovic was the Prime Minister of that Bosnian entity. The “50% Initiative” (Inicijativa 50%)² has pointed out the inequality when it comes to ambassadorial positions. The Facebook page of that organization states that there are 51 ambassadors of Bosnia and Herzegovina in the world. Out of that number, 12 ambassadorial positions belong to women, and significantly more - 29, belong to male diplomats. In that sense, women make up 23.53 percent (50% Initiative, 2021).

There are two women and eight men in the current composition of the Council of Ministers of Bosnia and Herzegovina. Women, therefore, make up 20% of the composition (Council of Ministers, 2021).

There are sixteen ministries in the Federation of Bosnia and Herzegovina entity, three of which are run by women and fourteen by men. The representation of women in the Federal Government is, therefore, 18 percent (Government of the Federation of Bosnia and Herzegovina, 2021).

There are six female ministers and eleven male ministers in Republika Srpska, and the percentage of women in the Bosnian entity is 35% (Government of Republika Srpska, 2021).

Bosnia and Herzegovina is an administratively complex country with legislative, executive, and judicial branches of government at the state, entity, and cantonal levels. Therefore, we will analyze data on the representation of women in the legislature, to draw certain conclusions about the gender balance in parliaments and assemblies:

State-level

The Parliament of Bosnia and Herzegovina consists of the House of Representatives and the House of the People. The House of Representatives consists of 42 representatives. In the 2018-2022 convocation there are 11 women and 31 men. Women make up 26%, whereas men have 74%.

The House of the People of the State Parliament consists of 15 delegates. Three of them are women and twelve are men. Women make up 20%, and men 80% (Parliamentary Assembly of Bosnia and Herzegovina, 2021).

Entity level

Table 3. Overview of women's representation in politics at the entity level

House of Representatives of the Parliament of the Federation of Bosnia and Herzegovina	Total number of deputies: 98	
	Men: 70 (72%)	Woman: 28 (28%)
House of Peoples of the Parliament of the Federation of Bosnia and Herzegovina	Total number of delegates: 58	
	Men: 45 (78%)	Woman: 13 (22%)
National Assembly of the Republika Srpska	Total number of deputies: 83	
	Men: 65 (79%)	Woman: 18 (21%)
Council of Peoples of Republika Srpska	Total number of delegates: 28	
	Men: 23 (82%)	Woman: 5 (18%)

² The “50% Initiative” gathers candidates and political activists of “Nasa stranka”, as part of achieving one of the NS goals, to have 50% of elected women in the elections. For equal representation! “Nasa stranka” is an opposition political party at the state and federal levels. Republika Srpska is not represented in the entity. In the Sarajevo Canto, the government is part of the “Cetvorka” (Four) coalition, and the Cantonal Prime Minister Edin Forto is a member of that party. It is a social-liberal political organization that was formed in 2008.

Cantonal level

Table 4. Overview of women's representation in politics at the cantonal level

Sarajevo Canton	Total number of representatives: 98
	Women: 13 (37%)
Zenica-Doboj Canton	Total number of representatives: 35
	Women: 14 (40%)
Central Bosnia Canton	Total number of representatives: 30
	Women: 13 (43%)
Una-Sana Canton	Total number of representatives: 30
	Women: 11 (36%)
Tuzla Canton	Total number of representatives: 35
	Women: 13 (37%)
Herzegovina-Neretva Canton	Total number of representatives: 30
	Women: 15 (50%)
West Herzegovina Canton	Total number of representatives: 23
	Women: 7 (30%)
Canton 10	Total number of representatives: 25
	Women: 2 (8%)
Bosnian-Podrinje Canton	Total number of representatives: 25
	Women: 6 (24%)
Posavina Canton	Total number of representatives: 21
	Women: 5 (23%)

The above-mentioned quantitative analysis indicates the dominance of males in the legislature at all levels of government in Bosnia and Herzegovina. At no level from cantons to state, women are more represented. The best situation is in the Herzegovina-Neretva canton where there is an equal number of men and women. The lowest number of women is in Canton 10, where they make up 8%, which leads to the conclusion that in Bosnia and Herzegovina there is no equal gender representation determined by law. Namely, the Law on Gender Equality in Bosnia and Herzegovina stipulates that the participation of the underrepresented gender in political processes should be at least 40%.

The non-governmental organization "Girls Foundation", which deals with gender equality issues, states: „The Law on Gender Equality and the provision of 40 percent representation is respected for a certain period during the year, and after that period it ceases to be respected, since after each election when the government is formed, women are not represented in government positions by legal provisions of 40% representation. Experiences from previous years show that women are most often represented in government with about 20 percent“ (Mujic, 2019, p. 43). The author of the publication on women's political participation in Bosnia and Herzegovina also states that women were represented in the media with only 15% during the campaign (Mujic, 2019, p. 51). Furthermore, Mujic states that the representatives of political parties should be the ones who should work on gender awareness of their members, not using women only as decor within a political party.

Mujic also emphasizes the importance of adequate sanctions for non-compliance with legal provisions, to ensure their actual implementation. During electoral campaigns, women are underrepresented in media coverage and often perceived as bystanders to male political party leaders, often treated as a cheap labor force for collecting votes for their parties (Bashevka, 2020, p. 2). The State Agency for Gender Equality also has certain recommendations when it comes to women's participation in politics. Following the round table held in December 2020, organized by the Agency for Gender Equality and the Regional Coordination Committee for Gender Equality, the following conclusions and recommendations were made:

- The key role of parties is to achieve greater participation of women in politics.
- The empowerment of women in political parties is necessary.
- It is necessary to create a climate for improving the position of women in all social-economic and political processes.
- Legislation needs to be improved (Proposal that political bodies without 40% of women be declared illegitimate).
- State support is needed to make it easier for women in their private lives to be able to act in public (Agency for Gender Equality, 2020).

SOCIO-ECONOMIC POSITION OF WOMEN IN B&H

The fact that Bosnia and Herzegovina, as stated earlier, is giving up 16% of its GDP due to gender inequality is not only striking but also has other consequences. Publication of the impact of gender division of family and household chores on the professional life of employed women in Bosnia and Herzegovina by Snjezana Hasanagic and Maja Papovic, clearly indicates that women in B&H spend much more time on household chores, unlike men who are dedicated to paid and leisure activities (Hasanagic & Papovic, 2020). According to a USAID survey (USAID Measure B&H, 2019), half of the respondents agree that most household chores naturally suits women more, almost 40% think that men have the last word in marriage, 40% think that fathers are not as suitable for caring for children as mothers.

The survey was conducted in 2020, using the method "face to face", and 500 female respondents who live with their partners participated. These are women between the ages of 18 and 65. The most significant findings are stated below:

- 43.6% of women are employed indefinitely
- 23.6% of women are working under a fixed-term contract,
- 9.6% of women are working in agriculture, fishing, or family farming,
- 7.8% of women work illegally,
- 7.4% of women work under a part-time employment contract or temporary services contract,

- 4.6% of women are private entrepreneurs,
- 31.4% of women are engaged in service and trade activities (waitress, cook, hairdresser, etc.),
- 20.5% of women are scientists, engineers, professors, etc.
- 18,2% of women are technical and professional associates,
- 8% of women perform less represented occupations - agriculture, forestry, fishing,
- 7.4% of women work in craft occupations and individual production,
- 6% of women are administrative officers,
- 4.4% of women are engaged in simple occupations - cleaner, production line worker, etc.,
- 1.2% of women are legislators, officials, and directors,
- 2.6% of women are in other occupations, which could not be classified into existing categories,
- There were no women in the sample who are machine operators, industrial manufacturers, and women who are engaged in military occupations,
- 69.4% of women are employed in companies that are privately or predominantly privately owned,

- 22.4% work in state or public institutions,
- 3.4% work in some other form of ownership (Hasanagic & Papovic, 2020, p. 11).

When it comes to monthly income, Hasanagic and Papovic survey shows the following:

- 24.2% of women have a monthly income of 501 to 750 KM,
- 21.2% of women have a monthly income of 751 to 1000 KM,
- 2.2% of women have a monthly income of 1001 to 2000 KM,
- There were no women in the sample with a monthly income of over 3000 KM (Hasanagic & Papovic, 2021, p. 14).

However, the research has also shown that in all categories (except the first one which includes salaries from 501 to 750 KM), there are more men than women. On the other hand, women are more represented in categories that imply lower incomes. Thus, for example, almost a fifth of women make less than 500 KM per month, while this is the case with only 6.4% of men, as shown by the chart published in the publication of the B&H Agency for Gender Equality:

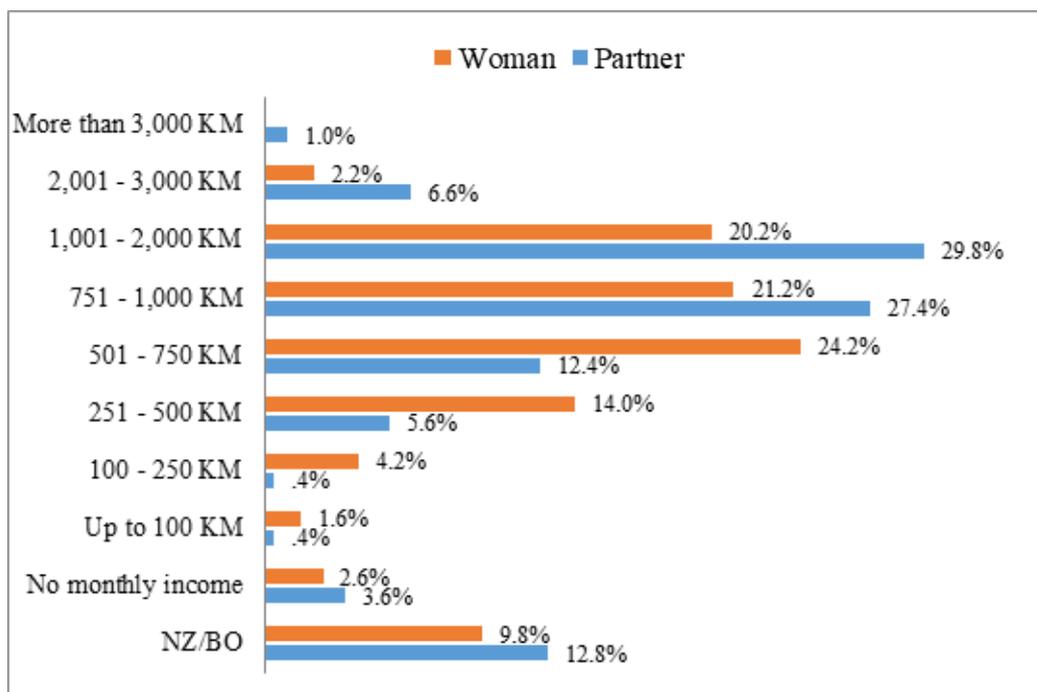


Chart 4: The amount of monthly income of women and their partners

Source: Hasanagic & Papovic, 2020, p. 14.

In addition, the results of the survey have shown that most of the household chores are done by women. According to the study, employed women spend five times more time on routine household chores than men. However, the key is how that affects private and professional life. Thus 16.8% of women, due to household and other family obligations had to give up: professional training, 16.25% business travel, 11.2% experienced conflict with colleagues

at work, 10.6% have received lower salaries due to inability performance of work duties, while 8.25% of respondents had to reject promotion. The key finding is that women in B&H take over most of the time in the household, and that they spend much more time on those obligations than men, but that they have lower average incomes, and that they have numerous negative consequences for career, well-being, and health (Hasanovic & Papovic, 2020, p. 35)

THE INFLUENCE OF THE CORONAVIRUS PANDEMIC ON THE ECONOMIC POSITION OF WOMEN IN B&H

In terms of economics, the coronavirus pandemic has changed the world. At this moment, for the second year in a row, European countries are introducing restrictive measures which include a ban on gatherings, the closure of hospitality facilities, and daily changes in the way of life we knew before the pandemic. Numerous lockdowns have affected all world economies and fall in GDP. Below is a table showing the decline of the economy in 2020, compared to 2019, published by Al Jazeera Balkans, citing data from the World Bank:

Table 5: GDP growth and decline in the countries of the region in 2019 and 2020

	2019.	2020.
MONTENEGRO	+4.1%	-14.9%
KOSOVO	+4.2%	-8.8%
CROATIA	+2.9%	-8.6%
SLOVENIA	+3.2%	-6.2%
NORTHERN MACEDONIA	+3.6%	-5.1%
BOSNIA AND HERZEGOVINA	+2.7%	-4.0%
SERBIA	+4.2%	-2.0%

Source: Hadzimusic, 2021

We can see that Bosnia and Herzegovina is not on the top when it comes to the economic downturn that Montenegro has suffered. The reason lies in the fact that the economy of Montenegro mostly depends on tourism, which is the branch of the economy most affected during the coronavirus pandemic due to various restrictions, travel bans, and flight suspensions. Bosnia and Herzegovina, on the other hand, doesn't have a "dominant" branch of the economy on which it depends. According to the World Bank estimates, the country's economy has experienced a fall of four percent in 2020.

We should mention that Bosnia and Herzegovina is a politically and administratively complex country in which the decisions are made on different levels of government - state, entity, and cantonal levels. Therefore, often during the coronavirus pandemic, when one measure was in place in one area or territory, there were other measures in another. In the Bosnia and Herzegovina entity, the Government decided to declare a state of natural disaster on March 16th, 2020, which enabled the adoption of measures and decisions at the entity level. The Government, among other things, decided that the prices of products remain the same as on March 5th, especially food products, medical equipment, and products. It was decided that one of the parents of children up to the age of ten can be absent from work and stay home with the child (Hadzic, 2020).

Shopping malls and restaurants in the entity were closed for 70 days, after the Federal Civil Protection Headquarters decided on March 18th (KLIX, 2020).

All the measures that were adopted affected the economy, i.e., the labor market. The analysis below will also show how. Here we will consider the registered unemployment, i.e., the number of people registered in Employment offices and services. The analysis will take into account the period immediately before the coronavirus pandemic, as well as the months with strict restrictions and lockdowns. Therefore, in our quantitative analysis, we will pay special attention to February, March, April, and May of 2020. According to the data from the B&H Labor and Employment Agency, unemployment rose the most in April and May, as we will see below.

February 2020

In February 2020, 402 888 unemployed people were registered in B&H. Compared to the previous month, the number of unemployed people decreased by 3,279 or .81%. However, out of the total number of unemployed people, 228 912, or 56.82% were women. In that month, 17,303 people were deleted from the records of employment services, out of which 8,565 were women. 8 981 people were employed, out of which 4 462 were women. During this period, employers reported the need to employ 4,249 people. In January 2020, the number of employed people was 833,909, of which 361,352 were women. Compared to December 2019, the number of employed people increased by .4%, and the number of employed women increased by .5%.

March 2020

In March 2020, there were 398,504 people on the records of employment offices and services. Compared to the previous month, the number of unemployed decreased by 4,384 or 1.09%. Out of the total number of jobseekers, 227,106 or 56.99% are women. Compared to the same period last year, unemployment is lower by 24,915 people or 5.88%. A total of 15,996 persons were deleted from the records of employment services, of which 7,494 were women. A total of 0,299 people are employed, of which 4,760 are women. Employers reported the need to hire 2,873 people. The number of employed people was 832,200, of which 360,918 were women. Compared to January 2020, the number of employed people decreased by .2%, and the number of employed women decreased by .1%. Employers reported the need to hire 4,249 new workers during this period.

April 2020

In April, 419,582 unemployed people were registered in B&H. Compared to the previous month, the number of unemployed people increased by 21,312 people, i.e., 5.35%. Out of the total number of job seekers, 240,079 or 57.22% are women.

Unemployment increased by 1.39% compared to the same period last year, or 5,756 people. A total of 5,837 people were deleted from the records of employment services, of which 2,434 were women. 3,588 people were employed, of which 1,459 were women. At the same time, employment was terminated for 21 649 people, out of which 12,227 were women. Employers have expressed the need to hire 715 new workers. In March 2020, the number of employed people was 830,421, of which 359,846 were women. Compared to February 2020, the number of employed people decreased by .2%, and the number of employed women decreased by .3%.

May 2020

In May, 421,474 unemployed people were registered. Unemployment increased by .45% compared to the previous month, i.e., 1,892 people. Out of the total number of job seekers, 240,615 or 57.09% are women.

Unemployment increased by 14,789 people or 3.64% compared to the same period last year. Unemployment growth was caused by reduced economic activity due to the Covid-19 pandemic, and unemployment has increased by 18,586 people since the beginning of the pandemic, or 4.61%. A total of 12,476 people were deleted from the records of employment services, of which 6,880 were women. 9,441 people were employed, of which 5,300 are women. Employment was terminated for 11 585 people, out of which 5 905 are women. During this period, employers reported the need to employ 2,506 workers. The number of employed persons in April was 808,894, of which 347,876 were women. Compared to March 2020, the number of employed people decreased by 2.6%, and the number of employed women decreased by 3.3% (Agency for Labor and Employment of Bosnia and Herzegovina, 2020).

Table 6. Changes in the labor market during the pandemic

2020	UNEMPLOYED	DIFFERENCE (PREVIOUS MONTH)	WOMEN	(%)	EMPLOYED	WOMEN	MARKET NEEDS
FEBRUARY	402 888	-3 279 (.81%)	228 912	56.82	8 981	4 462	4 249
MARCH	398 504	-4 384 (1.09%)	227 106	56.99	10 299	4 760	2 873
APRIL	419 582	+21 312 (5.35%)	240 079	57.22	3 588	1 459	715
MAY	421 474	+1 892 (.45%)	240 615	57.09	9 441	5 300	2 506

The table leads us to the following conclusions: The coronavirus pandemic had the greatest impact on the labor market in April, when registered unemployment increased by 5.35% compared to March 2020. The percentage of unemployed women increased slightly. While in the months not so affected by lockdown it was below 57%, in April and May it was above 57%, but this is not a significant difference. Figures also indicate that there are more men than women in the total number of employed persons in March and April, but this is not a significant difference. More women than men were employed in May. The extent to which the coronavirus virus pandemic has affected the labor market is best shown by the figure on the demand of employers in April 2020, when slightly more than 715 workers were in demand. Official statistics, therefore, do not reveal that women were significantly more affected by the coronavirus pandemic in economic terms than men.

DATA OF NON-GOVERNMENTAL ORGANIZATIONS

However, the situation on the ground does not always maintain statistical reality. The CURE Foundation,

as the coordinating organization within the B&H Women’s Network³, conducted a study that showed that women were economically significantly affected during the pandemic. The Cure Foundation’s research was conducted in 11 places - 5 cantons in the Federation of Bosnia and Herzegovina, and the Republika Srpska. The coronavirus pandemic is used as a reason to deprive women of economic resources. [The pandemic] Was used as an excuse by partners and other members of the household to deny them one of their basic rights, the right to work. On the other hand, there is a high risk of labor exploitation and fraud, because the labor market is reduced, so employers can manipulate conditions, blackmail their employees, and take advantage of the poor living conditions of their workers. The pandemic particularly affected women entrepreneurs, tourism workers, hospitality workers, as well as women who made a living from informal work, such as cleaning. The space for work in given areas is significantly narrowed and requires adjustment to market needs. Some of the women managed to adapt, but most did not (The CURE, Personal Communication, March 23rd, 2021).

³ The Women’s Network is an informal group of civil society organizations working on women’s human rights and promoting gender equality.

We received useful information in written correspondence from the company Mojposao.ba, which is an employment intermediary in Bosnia and Herzegovina. The results of their research will be presented in the table below:

Table 7. The survey conducted by mojposao.ba

Sex	Lost their jobs due to the pandemic	Kept their job	Were unemployed before the pandemic
Women	36%	25%	39%
Men	41%	38%	21%

Source: Mojposao.ba agency, 2020

According to the results of the second survey of the Mojposao.ba agency, which was conducted at the end of 2020 (the survey was related to the public call for the unemployed, and only the unemployed responded):

- 41% of the total number of women who participated in the research lost their jobs due to the pandemic,
- 51% of the total number of men who participated in the research lost their jobs due to the pandemic.

The conclusion is that, when it comes to numbers, women are not affected more than men. However, it should be borne in mind that even before the pandemic, the employment rate was higher before the pandemic. Furthermore, according to the Mojposao.ba agency, these are the sectors most affected by the pandemic:

Tourism and hospitality 27%⁴,

Retail: 12%,

Production: 11% (Mojposao.ba Agency, Personal communication, March 29th, 2021).

Mojposao.ba in their response submitted for the needs of this research states: „Although we do not have data on which sectors in B&H are predominantly male or female, we can be guided by ILO statistics which say that service activities employ the most women, and therefore we see that service activities are most affected by the pandemic crisis, however when we ask men and women individually, and if we take into consideration that the male employment rate was higher before the pandemic, we see that there is no big difference“ (Personal communication, March 29, 2021).

Response of the authorities

The Federation of Bosnia and Herzegovina adopted the Information on Gender Equality during the recovery process from the crisis caused by the coronavirus (COVID-19) prepared by the Entity Gender Center. The above-mentioned document proposes several measures, which are viewed from the angle of gender equality, and are related to the efficient and rational use of public funds for economic recovery and development.

⁴ That is, 27% of people who lost their jobs come from this sector.

Measures related to the labor market:

The Gender Center concluded that the Federation of Bosnia and Herzegovina has not yet developed flexible work arrangements that would give workers greater freedom of work and that they would meet personal or family needs and achieve a better work-life balance. They also state that the support system for employed parents was mostly inaccessible due to home isolation measures. In addition, sectors such as education and health care (particularly important during the pandemic) were seen as places of predominant employment for women, especially at lower levels of the hierarchy. For example, according to official statistics, 98.3% of women are employed in pre-school education, 69.8% in primary education, 57.1% in secondary education, and 39.8% in higher education. In 2011, three-quarters of the total number of public sector health workers were women. The largest difference in the gender distribution of health professionals was observed among pharmacists, 90% of whom were women, and more than 80% of medical technicians were women. In all other branches of the economy, there are significantly more males (Gender Center of the Federation of Bosnia and Herzegovina, 2020). The Gender Center of the Federation of B&H proposes measures that take into account the current situation of gender inequality:

- Economic recovery measures should take into account the resource represented by the inactive workforce; programs that will promote entrepreneurship could have a great effect - through formal and non-formal education, promotion of lifelong flexible learning, and other forms of direct support to women entrepreneurs.
- Ensure that all economic support measures are gender-neutral or reduce women's unemployment, especially in hard-to-employ categories.
- Invest in increasing the capacity of preschool education for employed and unemployed parents.
- Amend the Labor Law of the Federation of B&H and other labor legislation to eliminate existing forms of discrimination based on sex, and to adapt the Law to the concept of flexibility in the manner defined by Council Directive (EU) 2019/1158 of the European Parliament and the Council of 20 May 2019 on the work-life balance of parents and guardians and repealing Council Directive 2010/18 / EU.
- Improve labor legislation to establish a clear obligation for prevention and protection against all forms of discrimination in the workplace, etc.
- Continuous analysis and monitoring of the impact of economic recovery measures from the angle of impact on gender equality, to ensure that socio-economic measures prevent the deterioration of existing poor starting positions of women in the labor market.

- Improve socially responsible tourism as a special form of economic activity, expand capacities for the development of domestic tourism,
- Improve social protection programs,
- Consider all forms of social protection from the point of view of the impact on gender equality,
- Expand the coverage of children with preschool education and nurseries, and extracurricular activities including a public-private partnership to support working parents and the like (Gender Center of the Federation of Bosnia and Herzegovina, 2020).

HYPOTHESIS TESTING

By observing and analyzing the descriptive indicators from the previous lines of this paper (excluding GDP), relevant data from February 2020 to May 2020 can be seen. To confirm and show this through a regression analysis test, which examines the impact, the results are interpreted in Tables 5 to 8. The sample or variables, which took the form of summarized or derived variables, are only descriptive indicators: months - February, March, April, May; the number of unemployed in that period; the number of unemployed women; number of unemployed men; the needs of employers. Thus, one hypothesis emerged: *It is assumed that the coronavirus pandemic affected the economic position of women in Bosnia and Herzegovina*, which will be shown in the following lines.

Table 8. Correlation-Pearson Correlation

Correlation			
		p_k_v	ekon_polozej_zena
p_k_v	Pearson Correlation	1	.361**
	Sig (2-tailed)		.000
ekon_polozej_zena	Pearson Correlation	.361**	1
	Sig (2-tailed)	.000	

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

After processing the data conducted in SPSS based on descriptive indicators, we originally obtained Table 8 in which two variables were analyzed by correlation analysis. The first of these is p_k_v, which is a coronavirus pandemic, while ekon_polozej_zena signifies the economic position of women.

Table 11. Beta coefficient

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	
		B	Std. Error	Beta		
1	(Constant)	99.312	9.001		9.115	.000
	ekon_polozej_zena	11.242	1.198	.381	1.248	.000

The above table represents the direction and strength of the connection. The correlation amount of .361 significant at the .01 level is the mean value according to Cohen because according to his classification the values in the range of .30 to .49 are mean values, which means that in this case there is a significant correlation between these two variables. Therefore, we conclude that there is a link between the coronavirus pandemic and the economic position of women.

Table 9. Model Summary

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. he error of the Estimate
1	.361 ^a	.484	.240	7.2291

In Table 9, the results R (correlation coefficient) and R2 (determination coefficient) are very important. This table shows that R = .361. The value of R2 (R square) is R2 = .484. Thus, in the observed period, the economic position of women with 48 percent could be better explained by the coronavirus pandemic. It is important that this result did not occur in full only at the time of the coronavirus pandemic, but statistical indicators still show gender inequality even before the coronavirus. This is confirmed by the figure of Adjusted R Square, but also by the error, which is 7.2291.

Table 10. ANOVA

Model		Sum of Squares	Mean Square	F	Sig.
1	Regression	11901.27	3077.10	13.02	.000 ^b
	Residual	14401.13	334.42		
	Total	26302.40			

Table 10. ANOVA shows what the F coefficient is and its significance Sig. Its value is F = 13.022, and it is statistically significant at the level of inference p < .01 because of the value of Sig. = .000. He also says the overall regression is significant. The Sum of Squares together with the Mean Square represents results that ultimately do not affect the very conclusion of whether the regression itself is significant or not. Mentioned data in Table 7. F and Sig. represent the basis and confirmation of the impact of the coronavirus pandemic on the economic situation of women.

The variable ekon_polozaj_zena is the tested variable or predictor variable in this test and confirms whether the regression has its meaning during the test. Table 11 *Coefficients* gives the variable Beta (Beta coefficient), which by its size shows what the predictor variable is. The value of the Beta coefficient is .381 and the t value for these coefficients shows statistical significance (at the level of $p < .001$). The value of Std. Error in its amount of 1,198 is statistically insignificant in this case, together with the value of B which is 11.242. The essence is to confirm the impact, which is not particularly pronounced in this period of the coronavirus pandemic, as shown by descriptive indicators. Differences between men and women are noticeable even before the coronavirus pandemic, only, in this case, the difference is more pronounced through the descriptive indicators themselves, and it was confirmed by regression analysis.

CONCLUSION

The coronavirus pandemic has affected all the world's economies, and Bosnia and Herzegovina are no exception. The data we analyzed in this paper indicate a significant decline in economic activity during the first months of lockdown since March 2020 and „tectonic“ disturbances in the labor market. The increase in the number of unemployed in the first months of the pandemic in Bosnia and Herzegovina was measured in tens of thousands. Statistically, women are not significantly more affected than men. However, statistics in this sense offer us only partial truth. It is true that the number of unemployed women during the pandemic did not increase significantly compared to the number of employed men and that it is directly proportional to the statistics even before the pandemic, with slight percentage deviations. However, to analyze the real socio-economic position of women during the pandemic, one should keep in mind the position of women in Bosnian society in general. Our presentations so far have shown that women are less represented in politics, have lower wages, have a higher illiteracy rate among women, that women spend significantly more time on household and family responsibilities and unpaid activities than men, and that they spend significantly more time in the upbringing of children and other day-to-day responsibilities of parenthood. All this leads to the conclusion that the pandemic only highlighted the current situation, which can be confirmed through the results obtained by Pearson's correlation of .361 as well as regression analysis, but it is very important to mention the value of R square which is $R^2 = .484$, which is by no means negligible. This can be partially justified in some way by the fact that the closures imposed an additional stay at home and additional obligations around the children - care for online classes and the like. Statistics have revealed to us that the economic position of women has not improved, and our qualitative and ultimately quantitative research methods have clearly shown that it has somewhat deteriorated due to the existing gender gap in economic and social terms.

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CREATIVITY IN TEACHING MATHEMATICS

Original scientific paper

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ABSTRACT

Modern education aims to form a versatile and creative personality that will leave school equipped for life, and mathematical skills are deemed necessary skills to participate in modern society. So, one of the challenges of modern education is precisely to enable the conditions for the development of creativity in school. Therefore, the aim of this paper is to review the relevant literature to define the concept of creativity in mathematics teaching, point out the need to stimulate creativity in students and present some of the strategies for encouraging creativity in mathematics teaching. The paper presents the connection between mathematics teaching and creativity, as well as the factors that influence creativity in mathematics teaching. Strategies for encouraging creativity in teaching mathematics were also presented, as well as a presentation of games that can be used in teaching, with a review of their application in working with students with intellectual disabilities.

Keywords: *creativity, mathematical creativity, teaching, education, mathematics*

INTRODUCTION

The phenomena of human creativity had a role in science throughout history, since it is creativity that enabled societal progress, from science, to art, technology, and business. Human creativity was a research focus throughout history (Patrick, 1935, 1937; Wallas, 1926, all according to Runco, 2004; Rossman, 1931, according to Arar & Racki, 2003), but only after 1950, thanks to the work of American psychologist J. P. Guilford this phenomenon started to be researched more closely (Kunac, 2015; Somolanji & Bognar, 2009). In one of his lectures entitled “Creativity” at the University of Pennsylvania, Guilford first introduced the notion of divergent thinking, which he believed was synonymous with creativity, as opposed to the common convergent thinking (Makel & Plucker, 2014; Stankovska, 2020).

Divergent thinking and problem-solving means solving a problem in a new, creative, and unusual way

or redefining the existing way of solving a problem, while convergent thinking is based on memory and reproductive knowledge (Koludrovic, 2009; Richards, 2001). Today it is considered that creativity and divergent thinking are not synonyms, and that creativity includes different divergent thinking skills. Therefore, tests that measure divergent thinking only represent the potential of being creative (Runco & Acar, 2012). Creativity refers to a complicated and comprehensive process, therefore it is difficult to define it with one universally accepted definition (Anusic, 2016). According to Pedagogical encyclopedia, creativity refers to a specific cognitive activity that leads to something new, or a thinking activity that is directed towards what can become and not toward what is (Kadum, 2011). One of the ways of seeing the term creativity is to divide it into ‘creativity’ with a small letter c and with a large letter C.

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According to this division, creativity with a small letter is seen as a feature that enables and encourages creative products, while ‘Creativity’ with a large starting letter is seen as the process of creating new and original products in human activity (Klincic, 2018; Kunac, 2015).

Nowadays it is considered that creativity is one of the main starting points in youth educational process and that schools should strive toward formation of versatile and creative individuals that will be well equipped for independent living upon school finalization (Kadum, 2011; Stankovska, 2020) and mathematical skills are necessary for participation in modern society (Furner et al., 2005). Therefore, one of the main challenges of modern education is to create possibilities for enhancing creativity in schools. The school should transform itself into a cooperative and creative community, with the aim of improving children’s freedom of expression, originality, and flexibility in contrast with traditional education that is focused on reproducing learned lessons (Koludrovic, 2009; Koludrovic & Reic Ercegovac, 2010). Students’ creative abilities can be encouraged in mathematics classes by their teachers (Kadum, 2011).

Young children are naturally curious, and it is crucial to encourage that skill in mathematics as well and use it to teach them different mathematical constructs (Mann, 2006). Therefore, the teacher’s task is to recognize the creative potential in every student and use their curiosity to enable them to master the lessons (Kunac, 2015). Meanwhile, often the contrary occurs. The mathematics teachers present the children with some mathematical problems and expect them to follow certain steps to find the solutions. It is of crucial value to give them the opportunity to find solutions on their own (Gardner, 2006) because this correlates with successful performance in future real life situations, where the children would not get steps to problems solutions (Hirsh, 2010). Students with mild intellectual disability (MID) have the same creative potential as their typically developing peers and it is necessary to encourage it (Arbutina, 2011, according to Gagic et al., 2015).

However, children with MID have limitations when it comes to mathematical skills and they require more time to master certain mathematical skills (Duric-Zdravkovic et al., 2011; Japundza-Milosavljevic et al. 2016). They also have difficulties in acquiring functional mathematical skills (Buha-Durovic, 2010) and because of it, it is necessary to implement creative strategies while teaching them these skills. The newly published research (Japundza-Milisavljevic et al., 2019a; 2019b) shows that students with MID feel mathematical anxiety while solving mathematical problems and that older students exhibit more fear than younger students (Japundza-Milisavljevic et al., 2019a; 2019b). This data shows that it is of crucial value to teach creatively in lower grades, because it can create an encouraging atmosphere and give students more confidence, which consequently eliminates fear of mathematics.

Therefore, the aim of this literature review is to precisely define the term creativity in mathematics, to emphasize the importance of stimulating creativity in students and to give examples of some of the teaching strategies that can be used to enhance creativity in mathematics classes, as well as to explain the possible uses of those strategies while working with students with mild intellectual disability (ID). Introduction should contain the outlines of a research problem. References that describe the problem and reinforcement feasibility study.

RESEARCH METHOD

For literature search, search engines Serbian Library Consortium for Coordinated Acquisition (KobSON), Google Scholar, SCIndeks, and ScienceDirect were used. The literature that was published in Serbian and English language was used. Syntagma’s that were used as keywords were: creativity, mathematical creativity, teaching mathematics, intellectual disabilities, and creativity.

After initial search, the articles were selected by their titles and keywords. Articles published more than 20 years ago were excluded and articles that did not focus on creativity in teaching mathematics.

Methodological limitation of this article refers to the authors not being able to find sufficient research that focused on the use of creative strategies in mathematics while working with students with ID, therefore we gave the hypothetical suggestions for application of found strategies with students with ID.

CREATIVITY IN TEACHING MATHEMATICS

If we applied the above-mentioned view on creativity through creativity with lowercase and uppercase letters “C” to define the concept of mathematical creativity, we would get that mathematical “Creativity” is the ability to create a unique work that significantly improves the field of mathematics and/or the ability to open new questions for other mathematicians. While mathematical creativity with a small initial letter “c” on the other hand is a process that leads to unusual, new, or clever solutions to certain tasks or problems, as well as the ability to create new questions and the ability to look at old problems from another angle (Sriraman, 2005). Thus, it can be said that mathematical creativity is a process that, regardless of the complexity of the problem, leads to an unusual and surprising solution, and that this solution is not necessarily unusual for the whole environment, but only for the individual (Sriraman, 2004, according to Stankovska, 2020).

In addition to the above-mentioned definition of mathematical creativity observed through the concept of creativity with lowercase and uppercase letters “c”, we can list several important definitions of this term. Thus, for example, Amabile (2012) and Gregoire (2016) consider mathematical creativity to be a student’s ability to create a new answer or solution that is appropriate for an open task.

Other authors (Chamberlin & Moon, 2005; Haavold, 2014) define this term as the ability to generate new and useful solutions to simulated or applicable problems using mathematical expression. Nadjafikhah and co-workers (Nadjafikhah et al., 2012) point out that mathematical creativity consists of creating a new mathematical concept, discovering unknown relationships among mathematical facts and reorganizing the structure of an existing mathematical theory, while the same authors a year later (Nadjafikhah & Yaftian, 2013) view mathematical creativity as the ability to create new, useful, and appropriate mathematical combinations from pre-existing mathematical concepts or to discover unknown relationships among mathematical facts. Domestic authors equate mathematical creativity with any type of activity that leads students to independent acquisition of knowledge in an innovative way (Pinter Krekic & Ivanovic, 2013).

Originality, fluency, flexibility, and correctness of solutions are some of the features of mathematical creativity. Originality refers to the creation of unique and new ideas, fluency to the ability to produce many ideas (e.g., finding several ways to solve a particular task) and flexibility refers to the approach that leads to solving a task (Assmus & Fritzlar, 2018). In addition to the above, the correctness of the solution is also an important criterion of mathematical creativity, and it refers to the fact that the student's answer must be mathematically correct (Haavold, 2014). In addition to knowing the features of mathematical creativity, it is necessary to know mathematical reasoning in children to enable the development of students' creative potential.

Mathematical thinking and reasoning involve several different processes that are a prerequisite for the acquisition of mathematical knowledge. The primary process is the ability to recognize the problem, and it refers to the ability to notice the main question in a mathematical task and the tendency to find answers to that question in accordance with the previously presented data. The secondary process that implies the ability of mathematical reasoning refers to the richness of ideas, which can be stimulated by giving different logical games or continuing the series in accordance with the observed patterns (Pinter Krekic & Ivanovic, 2013). As the next ability, we emphasize originality, which refers to the ability to create new ideas and solutions. However, the role of the teacher is important, because if the teacher gives more freedom for creativity to students, consequently children will have more original solutions (Tekin & Taşgın, 2009). Redefining is the next ability built into mathematical reasoning, which implies the ability to use already known information and acquired knowledge when approaching the unknown. However, it is necessary for the teacher to show the students the ways to use previously acquired knowledge in solving new tasks (Pólya, 1979, according to Pinter Krekic & Ivanovic, 2013). Another ability involved in mathematical reasoning is fluency, which refers to the ability to produce many new ideas (Koludrovic & Reic Ercegovac, 2010).

Flexibility is the ability to vary the approach to a problem. Elaboration requires the ability of mathematical reasoning related to reshaping, changing, and adapting original ideas, and the ability of curiosity has an additional role to motivate students to solve a problem. Willingness to take risks is the ability of mathematical reasoning, which is of great importance, because it encourages students to express their opinions, attitudes based on their own experience and for its development, the influence of teachers is crucial. Imagination is a predisposition for the development of mathematical reasoning and implies thinking that comes from an idea (George, 2005), it is expressed in the ability of students to express themselves in different ways. Complexity as a mathematical ability requires the construction of alternative ideas and cause-and-effect relationships between different ideas, as well as the search for consequences for some fictitious problems (Koludrovic & Reic Ercegovac, 2010). It is necessary to encourage all these abilities in students, especially in the lower grades of primary school, when students are just getting acquainted with the teaching of mathematics.

THE IMPORTANCE OF ENHANCING CREATIVITY IN TEACHING MATHEMATICS

The teaching of mathematics has always had an important place in the educational system, so all students should have an equal chance to adequately master mathematical knowledge. For everyone to have this opportunity, the role of the teacher, his attitude towards mathematics and the approach to motivating students that would lead to success in this discipline are crucial (Furner et al., 2005). Encouraging the creative potential of students is provided in most curricula in mathematics, but unfortunately in practice it usually remains at the declarative level, where the encouragement of these potentials depends on the individual affinities of teachers, students, and textbook publishers (Koludrovic & Reic Ercegovac, 2010). In mathematics teaching, teachers most often use rigid algorithms and reproduction of facts, which in turn hinders the development of abilities such as divergent thinking, independent recognition of mathematical problems and the development of original solutions to problems (Pinter Krekic & Ivanovic, 2013). However, there are also examples of good practice when it comes to encouraging mathematical creativity. For example, in countries like Finland, the emphasis is on flexible and creative handling of complex mathematical situations and problems (Krzywacky et al., 2016). Taking into consideration that children's creativity is reflected in themselves creating ideas, organizing information and thinking about questions, they should be encouraged to ask questions and not be afraid (Simel & Gazibara, 2013). This way disables the possibility of students acquiring knowledge in a passive way, yet the focus is on a student and the teacher's role is to direct the teaching process (Acman & Doutlik, 2017).

A. The factors that influence enhancing students' creativity - encouraging environment

There are many factors that influence the development of creative potential in children, and these are individual differences among students, but also the opportunities provided to them during classes (Sternberg et al., 2004). Therefore, it is very important to enable students to participate in extracurricular activities that would encourage their creativity (Pinter Krekic & Ivanovic, 2013), assuming that the development of creativity in one sphere of life is transferred to others, including mathematics. All students have different interests, which should be nurtured, as well as different levels of ability and affinity for certain aspects of mathematics teaching (Beghetto & Kaufman, 2014), and all students should be given the opportunity to express their potential in the field of interest. Teachers' support in these areas is reflected in choosing between activities in which students will participate, because it has been shown that the role of teachers was more important for the development of creativity than students' predispositions (Niu, 2007), which includes the use of different teaching materials (Davies et al., 2013).

It is considered that teacher creativity is one of the important factors in the development of creativity of the student (Somolanji & Bogнар, 2009), in the form of accepting different answers of students (Simel & Gazibara, 2013), giving opportunities for autonomy, and highlighting the value of innovative solutions problems (Runco, 2004). It is important for teachers to understand that their role is to create an environment that encourages the development of creativity, through respect for the ideas of each of the students (Robinson & Kakela, 2006). It is also necessary to create in students the habit of creative thinking, by rewarding innovative solutions (Sternberg, 2012), instead of restraining creative freedom and setting expectations for conformism (Tekin & Taşgin, 2009). In addition to the above, it is necessary that the teacher has an adequate level of knowledge in the field of mathematics, to properly guide students in the process of acquiring mathematical knowledge, because it is a prerequisite for increasing student motivation in the learning process (Newman, 2004).

If the teacher approaches the lessons by asking students questions and giving divergent tasks, this will increase motivation, develop students' imagination and research spirit, because such questions and tasks allow students to give more different answers to one question and allow the teacher insight into ways of thinking of students (Vizek Vidovic et al., 2003; Walsh Burke, 2003), and provide students with the opportunity to give a variety of answers that promote the development of creativity (Koludrovic & Reic Ercegovac, 2010). Even some inappropriate types of student behavior, some teachers can use in a positive context (Armstrong, 2010), or as an opportunity to engage students in some additional activities and thus motivate them to work (Jensen, 2005).

Some teaching formats are considered to have an advantage over the others in the context of creativity development in students. It is believed that it is best if teachers used individual format and while organizing group format, it is recommended that the teacher only induces creative and divergent thinking in students, while giving important feedback (Stankovska, 2020).

In addition to teachers, the environment in which teaching is conducted is also of great importance. An environment conducive to the development of creativity in students must encourage freedom of expression without fear of condemnation (Sriraman, 2005), a sense of freedom to take risks while solving a task (Nadjafikhah, et al., 2012), and a lack of fear of error. Koichu & Orey, 2010; Pitta-Pantazi et al., 2018 Sheffield, 2018). Teachers must encourage students to be innovative in their approach to a particular task (Pham & Cho, 2018), appreciate their efforts to find an original solution and recognize those efforts (Shen & Edwards, 2017), ensure a positive emotional climate in the classroom (Kadum, 2011), and teach them to value their creative endeavor instead of being critical of it (Yushau et al., 2005). Bogнар (2010) gives recommendations for teachers that would encourage creative thinking in students, such as removing the time limit for solving certain tasks, as well as encouraging student cooperation and exchange of ideas, while Anusic (2016) states that competitive spirit and reward adversely affect to the development of creativity in teaching, hence they should be kept to a minimum. It is important to encourage cooperative play from an early age and prompt children to explore different materials and didactics (Kamii et al., 2007), because these activities enable further finding of solutions for potential problems that children can come across with (Hirsh, 2010). It is important to enable different resources, materials, use of different environments and activities in classes to encourage the development of students (Vasconcelos, 2017). The ability of teachers to use the various resources at their disposal, to carry out appropriate classroom activities (Pitta-Pantazi et al., 2018), as well as their self-confidence in the ability to transfer mathematical knowledge (Gregoire, 2016), has been shown to play a major role in this. If teachers have all or most of these qualities, they will succeed in creating a habit of creative thinking in students by involving students more often in creative activities, finding additional opportunities to express student creativity in teaching and rewarding such participation (Sternberg, 2012).

STRATEGIES FOR ENHANCING CREATIVITY IN TEACHING MATHEMATICS

Some authors state that potential ways of enhancing creativity in teaching mathematics is giving the students mathematical problems that are appropriate for their abilities (Christou, 2017), while others highlight that it is important to include technological advances in teaching mathematics (Dubovicki, 2012).

The teachers should encourage students to apply mathematical knowledge in real life and new situations (Shriki, 2009), give them the opportunity to find different solutions for one mathematical task (Sriraman, 2005), and enable combination of mathematical ideas and reshaping mathematical problems (Klincic, 2018). In addition to teachers, school textbooks should be one of the methods of encouraging student creativity in teaching and even in mathematics. School textbooks are a source of knowledge and without them work in most subjects would be unthinkable (Koludrovic, 2009). The textbook must be written in accordance with the laws of the learning process in children and in accordance with different levels of student abilities (Koludrovic, 2009), as well as the age of students and teaching topics that are currently covered (Dubovicki, 2012). Tasks from the textbook must encourage students to look for new and unusual solutions, so in teaching mathematics this can be done by requiring students to set the task independently (Koludrovic, 2009). Unfortunately, mathematics textbooks in most cases do not encourage students to think creatively enough (Dubovicki, 2012) and often boil down to a passive role that excludes the possibility of students' creative contribution (Yerushalmy, 2009). It is believed that neglecting creativity in mathematics teaching leads to the inability of teachers to notice the talent for mathematical reasoning in some students (Mann, 2006), and for students to develop mathematical talent, they must be given the opportunity for increased creativity in teaching (Suastika & Wahyuningtyas, 2017). If the teaching of mathematics does not require creative reasoning from students, it will not enable students to develop mathematical talents and potentials (Mann, 2006). It is of great importance that the teacher and the persons in charge of creating textbooks know the features of mathematical creativity to recognize them in students and adequately encourage them in teaching.

The teacher's role to encourage creativity in classes is of crucial value, but it is also very important to distinguish the terms: a) creative teaching and b) teaching for creativity (Jeffrey & Craft, 2004, according to Grohman & Szmids, 2013). The term creative teaching refers to teaching approach which makes learning more fun to students, while the term teaching for creativity represents teaching directed toward the development of creative thinking of students (Jeffrey & Craft, 2004, according to Grohman & Szmids, 2013). To achieve the best results, it is necessary to combine those two approaches (Kunac, 2015).

B. Creative teaching

Creative teaching involves the efforts of teachers to include creative methods and techniques (Simel & Gazibara, 2013; Starko, 2021), in a Taiwanese study, the authors (Clifford & Chou, 1991, according to Beghetto & Kaufman, 2014) divided students into two groups, where they told the experimental group to play a game in which they practice the way of thinking, and the control group to have a test.

It was shown that students who were told to play the game on assignments had better success than the control group. That is why it is important for teachers to redefine and adapt their approach to students, to develop students' creativity. Teachers can also do this by using activities that require students to generate a variety of ideas, redefine a problem, and think in a variety of ways (Beghetto & Kaufman, 2014). It is important to give students the opportunity to choose and opportunities to explore different materials, to encourage group work and collaboration of students through the exchange of ideas. When teachers decide to use extinct motivators in their work, it is very important to explain to students the value and importance of participating in a task, as well as to present opportunities for creativity in the classroom and that they have access to teaching students as an opportunity for personal expression of creativity (Beghetto & Kaufman, 2014). Teachers should therefore have a quality methodological approach, concretize the goals and tasks of teaching, and make them more creative, and choose contents and tasks that are diverse (Kadum, 2011; Koludrovic, 2009). It is important to give students the opportunity to independently create tasks in mathematics (Bilopavlovic et al., 2001). It is very important that teachers encourage humor in the classroom because it can lead to relaxation of students and lead to even more creative responses and solutions, and some authors point out that fantasy is a great technique to encourage creativity (Simel & Gazibara, 2013) and in that way, children also remember new and difficult contents easier and longer (Cupic et al., 2017). It is also important to use a variety of objects to generalize knowledge, such as Lego bricks (Dubovicki, 2012; Rudec, 2007), Coca-Cola cans, balloons, hair dryers, flowers, or fruits (Shijan, 2009).

C. Teaching for creativity

Teaching for creativity involves teachers' efforts to develop intrinsic motivation in students, encouraging diversity of students' ideas through reinforcing innovative and nonconventional solutions (Pintér-Krekić, 2007; Pinter Krekić & Ivanovic, 2013). Teachers should not underestimate children's ideas, but they should encourage them to create different solutions, reinforce creative approach to tasks and not allow students to feel fear and judgement when expressing those ideas (Kunac, 2015; Vranjkovic, 2010). Teaching for creativity involves explaining to students all the possible uses of mathematics in their everyday lives (Pintér-Krekić, 2007; Pinter Krekić & Ivanovic, 2013). Students must be prepared for creative solving of real-life mathematical problems (Simel & Gazibara, 2013; Starko, 2021), because often mathematics is taught to be conventional and mechanical and students are expected to listen and copy board work without any opportunity for taking initiative (Siswono, 2014) and thinking (Izzati, 2009), therefore this should be avoided. It is of great value that mathematics teachers teach students tolerance

and giving unique answers to mathematical problems (Sharp, 2004) and to continuously explain to students that the result is not important, but the process of solving problems (Suastika & Wahyuningtyas, 2017). Teaching for creativity can be achieved through involving students in conducting research, because children have the potential for finding unique and original ways of problem solving (Yushau et al., 2005), but it is also important to make sure that every student's interests and preferences are met (Mann, 2006). It is important to involve students in solving challenging mathematical problems that will tackle them to think and create new ideas (Freiman, 2006). Meanwhile, those tasks cannot be too difficult and must be in accordance with their previously acquired knowledge (Yushau et al., 2005) and their life experiences (Stankovska, 2020). If teachers disregard teaching for creativity, the students will not acquire necessary knowledge and it will disable the mathematical skills development (Pham & Cho, 2018) and it is emphasized that it is of crucial value that students have the knowledge of mathematical concepts, because they are the foundation of developing new ideas that can later transfer to different school subjects (Weisberg, 2006, according to Kattou et al., 2012). If the students could make decisions independently on how they will solve a certain mathematical issue, it is considered that this will improve their creativity (Palsdottir & Sriraman, 2017, according to Pitta-Pantazi et al., 2018). In further text we give examples of games and techniques that can be implemented in mathematical classes with the aim of developing students' creative potential.

D. Games in teaching mathematics

It is emphasized that it is necessary for teachers to apply different types of games in mathematics teaching (Cupic et al., 2017) to encourage students' creativity and ensure active participation of all students in teaching (Pinter Krekic & Ivanovic, 2013). Today, a whole series of methodological procedures has been created that encourage creativity in teaching (Bognar, 2012), and some of the teaching units in which there are great opportunities for creativity are form, space, and measurement. These teaching units may include activities related to different occupations in which measurement is performed, then the application of tangrams in teaching, which are an excellent tool for applying their own ideas and combinations, which also contributes to creative development of students, logical and abstract thinking. Geo Plates can be used very successfully in teaching units in which surfaces, or fractions are processed, because it encourages students to think critically in the context of noticing different features of certain shapes (Stankovska, 2020). The Geo Plate is a wooden or plastic board with nails arranged in a square net and rubber bands can be stretched around them. When processing teaching units that include geometric bodies, it is important to get students to notice the given geometric bodies in their immediate environment.

Another game that teachers can use in the classroom, which in turn encourages students' creativity, is a game called random concepts. This game works by having students extract a word and then write their associations and connect it with a given mathematical problem (Bognar, 2010). Also, it is recommended that teachers teach students to use mind maps when learning some difficult or extensive content (Simel & Gazibara, 2013). The Six-hat Technique is also a great way to encourage creativity in teaching, because it teaches students to think in different ways, as well as a game of provocation, which requires presenting different opinions of students about one mathematical problem. A similar game is Brainstorming (Wilson, 2009). The detailed description of the application of these techniques in mathematical classes, as well as the possible use of these strategies while working with students with ID is given in Table 1.

Humor is also a very important aspect of developing creativity in classes (Simel & Gazibara, 2013). If the teacher creates the atmosphere where all students feel safe and as if they are free to express their thoughts and ideas, the teacher can use humor as an important aspect of students' creativity expression. Some examples of using humor as techniques of improving students' creativity are 'Memories from the future' and 'Leading phantasies'. Both techniques enable students to give extraordinary statements while using their imagination (see Table 1) (Simel & Gazibara, 2013).

All techniques can be used while teaching different school subjects as well and success of their application depends on the teachers, students, and school policy. But, when it comes to teaching mathematics, the teacher must keep an eye on two things while selecting activities. Firstly, the task itself cannot be too difficult for students. Secondly, the task's context must refer to real life situations or include something interesting to students. These two criteria are of great value and if they are not implemented, it can lead to students seeing it as too difficult, monotonous, or uninteresting (Yushau et al., 2005).

Table 1. Review of the strategies for encouraging creativity in teaching mathematics and their potential application in working with students with mild intellectual disability

Reference	Strategy name	Strategy description	Application in math class	Application in math class with learners with mild intellectual disabilities
Bognar, 2010	<i>Random terms</i>	This activity aims to encourage divergent thinking in class. It is conducted in such a way that the student must draw the so-called "random word" and then write down on paper its properties and associations, after which the word relates to the given problem.	This activity could be applied by allowing the student to extract a random word and make it a textual task that is related to what they are currently learning in mathematics. Also, instead of words, the student can draw e.g., a piece of paper that says e.g., an angle of 90 degrees and children are asked to design and draw a figure in which one angle will have that many degrees.	Hypothetically, this type of activity involves modifications, depending on the student's abilities (e.g., instead of the text to be a picture or a real object if the child does not read).
Bognar, 2010	<i>Several "Why" questions Technique</i>	The teacher applies this technique by asking the students "Why did something happen?" Then he asks questions again, beginning with the word "why" and so on four times. The goal of this activity is to encourage divergent thinking and creative reasoning.	In math class, the teacher could write a series of numbers e.g., 2, 4, 6, 8 on the board and ask students why these numbers are listed just like that. In relation to their answer the teacher asks four more questions that begin with why. It can also be applied within a text task, e.g. "Three workers paint a house in 16 days, in what time would four workers paint a house?" When students give their answer, the teacher then asks them why they think they need so many days and, depending on the answer, asks four more questions that start with the word "why".	A special educator or teacher can modify the order and give an example of the task (with a picture example): Maya has two apples, and Milan has three. They have five apples together. "Why do they have five apples now?" The modification would be reflected in the fact that the teacher starts with one question "why" and gradually, depending on the student, he could add question after question until he reaches four questions "why".
Simel & Gazibara, 2013	<i>Six universal questions Technique</i>	The goal of this activity is to encourage divergent thinking in students. The teacher can apply this technique in class by asking students six questions: Where? When? How? Why? Who?	In math classes, we can apply this technique within textual tasks or when we want to present equations with one or more unknowns.	Hypothetically, we can try this technique in teaching mathematics to students with mild intellectual disabilities. For example, a special educator or teacher gives a story in pictures with a mathematical problem, children would be asked to put together a story as they thought they should, after which a special educator or teacher would ask a question to the student and thus see a solution together.
Simel & Gazibara, 2013	<i>Six hats Technique</i>	The goal is to notice the possibility that everything can be viewed from several angles, thus encouraging the ability to think in parallel. The activity can be realized individually or in groups. To achieve the goal, hats in different colors are given metaphorically, and each color represents one angle from which the problem can be seen. The white hat is used to draw attention to information we have or lack, and students who received this hat should look at the problem through the questions, "What do we know?" "What information do we need?" "What questions do we need to ask about this idea?" The black hat serves to warn the student of the possible shortcomings of the decision he makes regarding the problem. When a student gets a black hat, he should think about the risks and possible negative consequences of the idea. The green hat is the so-called creative hat. It is intended for planning and creating new ideas. The red hat has to do with intuition and feelings. It serves to express students' feelings. The yellow hat serves to find everything that is positive in the proposed solutions. The blue hat is intended to consider the thought process itself. It serves to identify problems, plan discussions, and consider what was done at the end of the activity.	Teachers can apply this in class by dividing students into groups, giving them colored hats, and explaining how they should observe the mathematical problem. The problem could be the following: "How many cm ² of cardboard is needed to make a box in the shape of a square 30 cm, 20 cm wide and 25 cm high?" Then each group gives an answer to the question in relation to the color of the hat, and at the end, when all the answers are summed up, the students make a box together.	We believe that this technique could be hypothetically applied, but it is necessary to gradually introduce each hat. E.g., two hats until the students gets acquainted with each of them and their role, then gradually increase the number of hats (views on the problem) until all six are reached.

Table 1. Review of the strategies for encouraging creativity in teaching mathematics and their potential application in working with students with mild intellectual disability

Reference	Strategy name	Strategy description	Application in math class	Application in math class with learners with mild intellectual disabilities
Simel & Gazibara, 2013	<i>Provocation Technique</i>	The goal of this activity is for students to see different and unusual possibilities of a problem. The task of the teacher is to start the activity with an unusual statement, the so-called provocation that students know is not true in the current situation, this provocation provides an original starting point for creative thinking.	The teacher can start the activity with an unusual statement such as “How many legs would a snake which is wearing football boots, ballet flats and sneakers at the same time?” In relation to students’ answers, teachers can devise further provocations.	We believe that special educators could use this technique in their work in mathematics classes. The modification could be reflected in the fact that there is a graphic presentation or a specific teaching tool with which students would solve the provocation.
Hirsh, 2010	<i>Visual thinking</i>	The goal of this technique is to encourage the student to visualize the problem and to solve the problem through illustration. Visual thinking is the ability to understand and interpret what we are learning. As a technique for encouraging creativity, it is used in teaching so that the teacher gives the student the task to illustrate the steps to solve a problem.	The teacher can tell students to illustrate the steps to the algorithm, organizational tables, mathematical tasks with visual stories and other visual representations of mathematical concepts.	We believe that visual thinking techniques are also applicable to students with mild intellectual disability. Students would be able to draw a mathematical problem and come up with a solution through drawing. If the student is not skilled in drawing, teachers could give him some specific teaching aid, or make a presentation to solve a certain mathematical problem.
Bognar, 2010	<i>Brainstorming</i>	The goal of the activity is for the student to present as many ideas as possible on a given question or problem. It can be performed in groups or individually. All ideas are recorded without prejudice and judgment of their accuracy. There are four rules to follow when using this technique. 1. The problem needs to be clear and understandable. 2. Every idea needs to be accepted and written down. 3. Students need to be encouraged to build on and build on other people’s ideas. 4. It is necessary for the teacher to encourage strange and unusual ideas.	This technique can be applied in mathematics in almost all areas. The teacher only needs to pose a clear problem e.g., in what ways can we reach the sum of 101 and let the students give their proposal for a solution to the problem.	We believe that this technique can be used in working with children with mild intellectual disabilities, considering that the problem that is posed does not exceed the knowledge that students have in mathematics. For example, they can be given the following text task: “M has 5 marbles, D has three more than M and N has twice as many as both combined. How many marbles does N have?” Students could give their suggestion on how to calculate how many marbles Nikola has and write it on the board.
Ivosevic, 2013	<i>Mind maps</i>	Mind maps are an analytical process that serves to better understand the problem we are dealing with. Mind maps can also be used to create new ideas. They are a means of creative thought organization. Some of the recommendations for making a mind map are to first define the topic (problem) in the middle of the paper. It can be represented by a picture, drawing, symbols, or words. Then, from that central theme, lines branch out that expand the theme, and those lines are logically interconnected. Each of the lines can have a keyword, it is recommended to use colorful colors to make the map more picturesque and impressive.	Mind maps have a wide application in teaching mathematics. For example, students can make a mind map for a curriculum of round geometric bodies. In the center of the map, the student can draw a ball, a roller, and a pile, then draw a branch for each shape in which he would use drawings and formulas to mark important components such as surface, cross-section, and volume. With this map, the student can more easily remember the formulas he needs to solve the task.	We believe that students with mild intellectual disability could create mind maps in class that would serve them in solving mathematical problems. They would need the help of educators, but they could make maps consisting of pictures or of real objects.

CONCLUSIONS

Creativity is one of the essential characteristics of a person. Therefore, it is of great importance that this characteristic is nurtured and developed in students through education. Teaching for creativity and creative teaching should be an integral part of every school subject, including mathematics teaching, which is usually reduced to learning facts without the possibility of entering one's own ideas and solutions. Observing the definitions of mathematical creativity, we can conclude that every type of non-reproductive activity of students, which leads to independent acquisition of knowledge or solving a mathematical problem, is mathematical creativity.

In this paper, it is presented how the application of creativity in teaching mathematics can positively affect the acquisition of knowledge in this area in students as well as techniques that can be used in teaching mathematics. From the mentioned techniques for encouraging creativity in teaching, we would single out the Mind Maps, the Brainstorming as well as the Technique of Random terms, because these techniques can be applied in teaching mathematics when processing different teaching units.

Considering that encouraging creativity in teaching mathematics is of great importance for the education of all students, instead of the classic conclusion, we want to open a new question: "How to encourage creativity in teaching mathematics in working with lower primary school students with mild intellectual disabilities?"

We consider this question to be of great importance knowing the research of recent data in our environment (Japundza-Milislavljevic et al., 2019a; 2019b) indicates that students with mild intellectual disabilities feel mathematical anxiety when solving mathematical problems, especially in higher grades. Pinter Krekic and associates believe that to encourage creativity in teaching mathematics, it would be much more efficient to abandon the numerical grading system and to introduce descriptive grades (Pinter Krekic et al., 2013). In this way, the pressure to achieve standardized academic achievement would be reduced and the focus would be on creativity and open thinking (Basic et al., 2021; Pinter Krekic & Ivanovic, 2013).

Considering that there is a small number of studies dealing with mathematical creativity in students with mild intellectual disabilities, instead of a conclusion, we recommend conducting research to examine the characteristics and possibilities of applying some of the techniques to encourage creativity given in Table 1 with a sample of students with mild intellectual disabilities.

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A STUDY ON THE USE OF METACOGNITIVE READING STRATEGIES BY LEARNERS WITH PSYCHOSOMATIC CONDITION

Original scientific paper

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ABSTRACT

The study examines the influence of metacognitive reading strategies in developing the reading comprehension skills among ESL (English as Second Language) learners with the psychosomatic condition. Qualitative and quantitative research was used in the present study and it was an experimental study. Reading comprehension skill is crucial to language learners for effective decoding of the information. Metacognitive reading strategies aid the learners to develop reading strategies for effective comprehension of the text. The metacognitive strategies like pragmatic and analytical strategies were used in this research to improve the intensive and evaluative reading comprehension skills. The participants of the study are a hundred and twelve (Male and Female) tertiary level ESL learners from the undergraduate engineering program. The experiment intends to improve the reading comprehension skills among the samples with psychosomatic conditions. The sampling method used in the study was purposive sampling. Data collection tools like questionnaires, pre-test, post-test, and post-feedback questionnaires were used in the study. An android-based application will be created with the activities and instructional materials and it was circulated to the learners. Metacognitive reading activities were given to the learners through the application and data was collected. Results were quantitatively analyzed using statistical tools from the data collected through the application. The results of the present study were indicative that there is a significant improvement in the learners' reading comprehension skills due to the intervention of metacognitive reading strategies.

Keywords: Metacognition, Reading comprehension, Metacognitive reading strategies, Analytic component, Pragmatic component

INTRODUCTION

Psychosomatic disorder is a psychological disorder that eventually leads to physical illness. Increased anxiety, stress, and depression may trigger the immune system or hormones and will cause physical ailments in the long run. According to Ghiggia et al. (2017), learners with psychosomatic conditions have a high level of psychological distress and emotional stress resulting from physical ailments. Independent of the type of psychological disorder, the ability to be aware of one's cognition and mind is impaired in the presence of a mental disorder (Vives, Morales,

Barrantes-Vidal, & Balleespí, 2021). As a result, the reading process, cognition, decoding, and semantic comprehension are difficult for those with disabilities and psychosomatic disorders. Metacognitive strategies will help to direct, monitor, control, and implicate their cognitive processing among learners with psychosomatic conditions. Comprehension skills, cognition, and cognitive processes are improved among the psychosomatic condition through the analytic and pragmatic skills in the metacognitive reading strategies.

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Readers' conscious mental activities were also implicated in metacognitive strategies for effective comprehension (Phakiti, 2003).

Reading comprehension is a crucial skill for comprehending and knowing the information in the written text and it entails several cognitive processes. According to Kintsch and Rawson (2005), reading comprehension involves multiple processes. Lower-level processes focus on the text, and its relation with other words in a sentence, whereas higher-level processes require semantic interpretation of the overall sentence. In low-level processing, the relationship of the text and meaning is decoded for each word in a sentence whereas in higher-level processes the comprehension process involves the prior knowledge to identify the meaning based on the intention of the author and relates the semantic notion of overall sentences. Readers must use their obtained knowledge and perceive the overall semantic information to identify the relative context of the sentence (De Groot, 2013). Kintsch and Rawson (2005) have believed that the process of understanding the meaning of a text does not limit to the acquisition of meanings and interrelationships of the other words but rather to identifying the semantics of overall text relation. The process is known as text base as it aims to comprehend the semantic meaning as stated in the text (Eilers & Pinkley, 2006). In the present study, the researchers aim to develop the reading comprehension skill by using the metacognitive reading strategies to tertiary ESL learners with the psychosomatic condition.

Metacognitive Reading Strategies

Metacognitive strategies are defined as "thinking about the learning process, planning and monitoring the language comprehension or language production, and self-evaluation of the learning process." Cognitive psychology (Hart, 1965) and cognitive developmental psychology (Piaget, 1850) are the foundations of metacognition. The term metacognition has been coined by John Flavell (1979) and he defines metacognition as one's acquaintance and knowing their cognition. Brown (1978) followed by Flavell defines metacognition, as the knowledge and structuring of the learners' thought activities which employ in acquiring the knowledge and problem-solving. According to Wellman (1985), metacognition is "a person's cognition about cognition or thinking about thinking".

Educating learners on employing metacognitive strategies improves their overall educational outcome (Biggs, 1996). Students with significant metacognitive skills will progress, and monitor their own language needs and learning pace. They learn and use new reading and learning strategies to effectively read or comprehend the language content. Learners who effectively employ metacognitive strategies were knowledgeable about their assets and deficits, they seek to develop their language skills more than other learners (Bransford, Brown, & Cocking, 1999). Oxford (1990) put forth that metacognitive reading

strategies are sub-strategies employed by the learners to observe, plan, systematize, and evaluate their learning pace. Taraban, Kerr, and Rynearson (2004) categorizes the metacognitive reading strategies into the pragmatic component (comprising 6 items) and the analytic component (comprising 16 items). Taraban et al. (2004) formulated the "Metacognitive Reading Strategy Questionnaire (MRSQ)" to analyze the use of strategies by language learners. Taraban (2011) affirms that first-year students employ analytic skills in their reading process upon entering the institution. During their senior year, learners displayed significant improvement in the usage of analytical strategies. Taraban, Suar, and Oliver (2013) employ MRSQ to analyze the use of metacognitive reading strategies among Indian students and US students. The study affirms that Indian students face difficulty in using the English language as they were not native speakers of English. The study concludes that Indian students employ analytical strategies over pragmatic strategies. Vianty (2007) uses Taraban's MRSQ to analyze the learners' use of metacognitive reading strategies while reading two languages. Vianty concludes that learners employ pragmatic strategies while reading English. Becirovic, Brdarevic-Celjo, and Sinanovic (2017) employ Taraban's MRSQ among non-natives at Burch University and gender, academic grades, and field of study plays an important role in employing metacognitive reading strategies. Gavora et al (2020) investigates the use of metacognitive strategies in the university students of Czech, Slovakia, Hungary, and Czech. The metacognitive strategies were analyzed based on the students' cross-cultural perspectives. The study concludes that pragmatic strategies were used by university students over the analytical strategies. Murtadho (2021) employs metacognitive skills to develop the learners' argumentative skills in writing. Hamiddin and Saukah (2020) focuses to analyse the role of metacognitive knowledge in improving reading comprehension skills. The present study aims to employ MRSQ Questionnaire among ESL learners with psychosomatic conditions to analyze and improve their use of metacognitive reading strategies.

Background Study

English is considered as a global language. However in India, English is considered as a second language. Therefore, the participants of the study face difficulty to process the language and comprehending the semantic meaning. Tertiary level students owe much importance to education to improve knowledge through effective comprehension and using skills to adapt to individual learning needs. Metacognitive skills play a significant role in developing the learners' intensive and evaluative reading comprehension skills, content comprehension, and overall academic achievement (Ahmadi, Ismail, & Abdullah, 2013). Despite its significance, metacognitive strategy has been an underappreciated skill in English language classrooms in India (L. Gehlot, Al-Khalaf, & H. Gehlot, 2020).

According to Ahmadi and Ismail (2012), reading comprehension plays a significant role in improving the ESL language learning process and he states that metacognitive reading strategies should be employed at school and college levels. Metacognitive reading strategies will also develop ESL learners' cognition and increases their future-oriented and goal-oriented thinking (Salataki & Akyel, 2002; Phakit, 2003). Madhumathi and Arijit (2012) say that Indian students focus on reading the text, but fail in understanding the semantic association of the text. Keeping the above notions, the present study aims to improve reading comprehension through metacognitive reading strategies among ESL Tertiary learners. The study employs 22 components of the metacognitive strategy devised by Roman Taraban et al. (2004).

The participants of the study are Tertiary ESL learners with psychosomatic conditions. Psychosomatic conditions will affect cognitive functions and will cause memory and attention disabilities. The psychosomatic condition has a significant influence on the learners reading and comprehension process. Stenager, Knudsen, and Jensen, (1991) concludes that psychosomatic conditions will eventually lead to cognitive dysfunctions and memory disabilities. Due to existing cognitive frailty, learners' language comprehension skills are relatively poor. Lysaker et al. (2018) affirms that metacognition and metacognitive strategies were significantly meager among learners with mental disorders. Hence the study employs metacognitive reading strategies to overcome their difficulty in comprehending the text or while doing the reading comprehension activity.

Significance of Reading Comprehension

Comprehension is the foundation of learning, and reading is the foundation of comprehension. Reading comprehension necessitates the effective use of cognitive processes, which necessitates perceptive behaviors in the individual, which is the awareness of his cognition processes. Reading comprehension is the perception, understanding, and comprehension of the text, and it is to comprehend the information, feelings, and thoughts that are intended without causing any misapprehensions (Aksan & Kisac, 2009). The cognitive structure is required for effective reading comprehension. Cognitive hypotheses focus on the individual perceptual skills, memory, advanced information, and mental operation techniques (Akyol, Sungur, & Tekkaya, 2010). Yagcioglu and Deger (2002) conclude that students with the metacognition skills are effective skilled readers. Metacognitive strategies raise the awareness of students while reading, students' reading processes, asking questions, and effective comprehension. Weir (1998) affirms that good readers employ different metacognition strategies to effectively comprehend the text. Hence, the present study aims to improve the learners reading comprehension skills through metacognitive reading strategies. Learners with Psychosomatic disorders were selected for the study because they possess low cognition levels.

Due to their less cognitive processing, their comprehension level and reading level were relatively poor. The research aims to employ metacognitive strategies to develop cognition and comprehension skills.

Objectives

The objective of the study is to improve the reading comprehension skill through the intervention of metacognitive reading strategies among ESL tertiary learners with the psychosomatic condition. Following null hypothesis were formulated for the study,

H01: There is no significant difference between the pre-test and post-test mean scores of the control group.

H02: There is no significant difference in the pre-test and post-test mean scores of the experimental group due to the intervention of metacognitive reading strategies.

METHOD

Samples and Sampling Method

The samples of the study are Tertiary ESL learners from the Vellore region. The samples were in their adolescent period, where their age group is a difficult changeover of psychosocial improvement and memory improvement (Khatoon & Dutta Roy, 2017). The sampling procedure employed in the present study was the purposive sampling method. The questionnaire (PSQ) consisting of 39 items was circulated to 200 urban tertiary ESL learners of the Vellore region in India. According to the Union Educational Ministry (2021), the Vellore district is considered educationally backward. Vellore is listed sixth as educationally backward in the state of Tamil Nadu. Kallakuri, Devarapalli, Tripathi, Patel, and Maulik (2018), put forth that mental and physical disorders are thrice higher in urban areas than in the Indian rural areas. Psychosomatic Symptom Questionnaire (PSQ-39) which was adapted from Lacourt, Houtveen, and van Doornen (2013) was used to categorize the tertiary ESL learners with the psychosomatic condition. World Health Organisation (WHO, 2021) has affirmed that one in seven suffers from psychosomatic disorders during the late adolescent period. World Health Organisation (WHO) upholds that the individuals will have memory and attention deficit disorders and they experience difficulty coping with learning strategies and education.

Research design

Qualitative and quantitative research was employed in the study. The survey method and experimental study method were employed in the present study. The psychosomatic Symptom Questionnaire (Lacourt et al., 2013) was used to find the tertiary ESL samples for the study. The questionnaire was circulated to the 250 participants.

112 samples (Control group and Experimental group) were selected from 250 participants for the study was selected based on the psychosomatic condition. The decision was attained based on the respondent's response to the Psychosomatic Symptom Questionnaire. 56 participants were selected as the control group and 56 participants were selected as the experimental group. No intervention was applied to the control group. Following interventions are applied to the experimental group.

The android application was created by the researcher and the pre-questionnaire, post-questionnaire, pre-test, post-test, and progressive test and language learning materials were uploaded to the application. Pre-questionnaire survey and post-questionnaire survey were employed to analyze the metacognitive reading strategies. It was circulated to the selected 56 participants. The instructional method was carried out through a synchronous and asynchronous learning environment. "Metacognitive Reading Strategies Questionnaire" (Taraban et al., 2004) was employed to analyze the learners' reading techniques that they employ during their reading process. The questionnaire was used by the researcher after obtaining prior permission from the author (Taraban et al., 2004). Reading comprehension activities were taken from the British council reading activity. Intensive and evaluative reading comprehension was selected as an activity for the study, as it increases cognitive abilities. Intensive and evaluative reading comprehension activities make the learners apply effective reading strategies to decode the semantic relationship of the text. Two reading comprehension activities (level B2-Intermediate level) were given to the learners as pre-test and post-test. Five reading comprehension activities (level B2-Intermediate level) were selected for progressive tests.

A pre-test for 20 marks (Reading comprehension) was conducted for both groups to examine their reading comprehension skill. Metacognitive Reading Strategies Questionnaire was used to analyze the learner's level of reading and the metacognitive strategies they employ while answering reading comprehension questions. Metacognitive reading strategies were taught to the learners through PowerPoint presentations, and learners were asked to imply the metacognitive reading strategies while doing the activity.

A continuous progressive test (50 marks) was conducted on the sample and they were asked to employ metacognitive reading strategies while doing the reading comprehension exercises for the experimental group. Five evaluative and intensive reading comprehension exercises were uploaded to the application, and progressive tests were conducted on the participants to analyze their improvement levels. During the activity, all the metacognitive reading strategies and their meaning, and place of usage are informed to the students before doing the exercises. After completing the progressive test learners' marks were recorded. The mean value of the marks was represented in the chart.

Post-test for 20 marks (reading comprehension) was given for the learners (both the control and experimental group) after the instruction and progressive test. The data was interpreted by employing SPSS software. Pre-questionnaire and post-questionnaire data were analyzed in SPSS using descriptive statistics and frequency analysis. Cronbach Alpha Coefficient was used to analyze the reliability of the questionnaires (PSQ and MRSQ). Paired t-test was conducted to analyze the post-test and pre-test values. The mean was analyzed in paired t-test. An independent t-test was conducted to analyze the post-test scores of the control group and experimental group.

RESULTS AND DISCUSSION

In the present study, the Psychosomatic Symptom Questionnaire (PSQ) and "The metacognitive Reading Strategies Questionnaire (MRSQ)" were employed to identify the psychosomatic disorder and employ reading strategies. A psychosomatic symptom questionnaire was devised by Lacourt et al. (2013), which has 39 items and it has questions related to "gastrointestinal symptoms, cardiac symptoms, respiratory symptoms, physical fatigue symptoms, and cognitive symptoms". In the present study, learners were selected as the sample if they often or frequently experience the symptoms mentioned above. The questionnaire was circulated to 270 participants and from the respondents, 112 respondents displayed to have a psychosomatic condition. 33% of the selected samples displayed gastrointestinal symptoms, 27% displayed cardiac symptoms, 22% displayed respiratory symptoms and 16% displayed physical fatigue symptoms. Over 70% affirm that they have cognitive symptoms. Metacognitive reading strategies were used as the intervention among the experimental group. Metacognitive reading strategies were employed as an intervention in the experimental group. The "Metacognitive Reading Strategies Questionnaire (MRSQ) was devised by Roman Taraban et al. (2004) and categorizes the metacognitive reading strategies into 22 items. The strategies were divided into two major strategies, the analytical strategies, and the pragmatic strategies. The analytical strategies have 16 strategies like evaluation, revising back, drawing inferences, setting reading goals, presenting the information later, Anticipation, using the information in the current text, noting hard words in the text, using reading strengths, revision, considering the information, distinguish between facts, inferring, searching for the information, identifying the meaning, visualization of the information. Pragmatic reading strategies consist of 6 strategies taking notes, highlighting the important information, margining the ideas, underlining, reading again, and more, re-reading the text. A reliability test was conducted in SPSS for the two questionnaires and the Cronbach alpha coefficient value is displayed in Table 1 below.

Table 1. Cronbach alpha coefficient of the questionnaire

Questionnaire	Items	Cronbach Alpha Coefficient
Psychosomatic Symptom Questionnaire (PSQ)	39 items	.840
Metacognitive Reading Strategies Questionnaire (MRSQ)	Analytical Component (16 Items)	.875
	Pragmatic Component (6 Items)	.783

The Metacognitive Reading Strategies Questionnaire (MRSQ) was used as a pre-questionnaire and post-questionnaire to analyze the analytical strategies and pragmatic strategies during pre-intervention and post-intervention among the experimental group. Table 2 presents the interpretation of the pre-questionnaire for the experimental group.

N represents the samples selected in the target group. The data represents that, students employ both analytic reading strategies and pragmatic reading strategies while doing the reading activities. From Table 2, it is indicative that, the least used analytic reading strategies are evaluation (2.60), reading goals (3.12), and visualization (3.12). The least used pragmatic skills are margining the ideas (2.87). The frequently used analytical strategy before the intervention were distinguishing (3.48) and searching the information (3.35). The frequently used pragmatic strategies are read more (3.28). The revision strategy was used very frequently by 27 learners (Table 2).

Before beginning the intervention in the study, the pre-test was conducted for the experimental group for 20 marks. The mean value of the experimental group was 6.0536. Questionnaire (Pre-questionnaire and Post-questionnaire) data were analyzed in SPSS, where a descriptive test and frequency test were conducted and data were tabulated in Table 2 below.

Table 2. Pre-questionnaire-MRSQ (22 items), N=56

MRSQ Component	Mean	Std. Deviation	Std. error mean	Frequency				
				1	2	3	4	5
<u>Analytic Reading Strategies</u>								
Strategy 1 (Evaluate)	2.60	1.28	.17	14	14	13	10	5
Strategy 2 (Visualisation)	3.12	.66	.08	1	8	31	16	0
Strategy 3 (Meaning)	3.14	.96	.12	3	11	19	21	2
Strategy 4 (Search)	3.35	.81	.10	8	24	19	3	2
Strategy 5 (Infer)	3.19	.86	.11	1	10	25	17	3
Strategy 6 (Distinguish)	3.48	.95	.12	1	8	17	23	7
Strategy 7 (Consider)	3.33	.90	.12	1	10	17	25	3
Strategy 8 (Revise)	3.32	.74	.09	0	9	20	27	0
Strategy 9 (Strengths)	3.14	1.03	.13	3	13	17	19	4
Strategy 10 (Note hard text)	3.21	.75	.10	0	11	22	23	0
Strategy 11 (Current Information)	3.14	1.03	.13	1	12	20	17	6
Strategy 12 (Anticipate)	3.17	.76	.10	0	8	34	10	4
Strategy 13(Present later)	3.14	.81	.10	2	9	24	21	0
Strategy 14 (Reading goals)	3.12	.85	.11	3	8	24	19	2
Strategy 15 (Draw)	3.25	.89	.12	1	10	23	18	4
Strategy 16 (Back)	3.25	.91	.12	1	10	24	16	5
<u>Pragmatic Reading Strategies</u>								
Strategy 1 (Note)	3.21	.75	.10	0	8	32	15	1
Strategy 2 (Highlight)	3.16	.80	.10	2	8	25	21	0
Strategy 3 (Margin)	2.87	.93	.12	6	10	25	13	2
Strategy 4 (Underline)	3.23	.76	.10	1	8	24	20	3
Strategy 5 (Read more)	3.28	.80	.10	1	9	17	25	2
Strategy 6 (Re-read)	3.08	.80	.10	2	10	20	21	3

During the intervention, five progressive tests were conducted to analyze the improvement level of the learners. Before conducting the tasks, the students were instructed about all of the metacognitive reading strategies, their meaning, and where they can be used through PowerPoint presentations. The learners' scores were recorded when they completed the progressive test. The graph represented the mean value of the marks. From Figure 1 it is evident that, in progressive test 1, the score of the learners is 8.32. After the intervention, the students begin to show interest in using the metacognitive reading strategies while doing the reading comprehension activity.

In the successive progressive test, the students showed improvement in their scores while doing the reading comprehension activity. In Figure 1, the mean value of the second progressive test was 10.69 whereas the progressive test 5 value is 13.12. The mean difference is calculated to analyze the improvement score. The following Formula was used to analyze the Mean Difference (MD). $MD = (\sum x_1 / n) - (\sum x_2 / n)$ x_1 means the mean value of the control group, x_2 means the mean value of the experimental group and n means the total number of participants. The mean difference between progressive test 1 and progressive test 5 was 4.8.

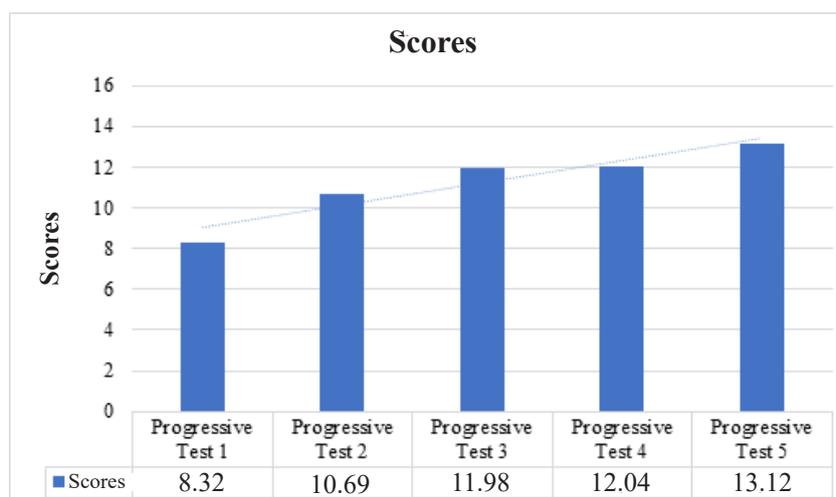


Figure 1. Progressive Test

After the Intervention, a post-test was conducted for the learners in the experimental group. Post-questionnaire data were collected from the experimental group of learners using the Likert scale. Description statistics and frequency were analyzed for the post-questionnaire. After the intervention, learners showed interest in employing both analytical components and pragmatic components of metacognitive reading strategies while doing the reading activities. Learners seem to apply the metacognitive reading strategies more frequently while doing the reading activity in post-test (Table 3) when compared to the mean scores of metacognitive reading strategies on the pre-questionnaire.

Frequently employed analytic reading strategies were anticipation strategies (4.01) and going back to read text (4.01). In Table 3, it is evident that frequently-used pragmatic strategies were re-reading strategies (4.00) while doing the reading activity. The least used analytic strategies were reading strengths (3.87) and drawing the information (3.87) least frequently used pragmatic strategy was reading more (3.76). After collecting the data from the post-questionnaire, 20 marks post-test was conducted for the learners of the control and experimental group. The post-test data were tabulated using paired t-test and independent t-test.

Table 3. Post-questionnaire-MRSQ (22 items), N=56

MRSQ Component	Mean	Std. Deviation	Std. error mean	Frequency				
				1	2	3	4	5
<u>Analytic Reading Strategies</u>								
Strategy 1 (Evaluate)	3.98	.75	.10	0	16	25	15	0
Strategy 2 (Visualisation)	3.98	.88	.11	0	3	13	22	18
Strategy 3 (Meaning)	3.98	.75	.10	0	0	16	25	15
Strategy 4 (Search)	3.89	.82	.11	0	2	16	24	14
Strategy 5 (Infer)	3.89	.91	.12	1	1	17	21	16
Strategy 6 (Distinguish)	3.94	.86	.12	1	0	16	23	16
Strategy 7 (Consider)	3.98	.77	.10	0	1	14	26	15
Strategy 8 (Revise)	3.91	.84	.11	0	3	13	26	14
Strategy 9 (Strengths)	3.87	.83	.11	0	2	17	23	14
Strategy 10 (Note hard text)	3.84	.91	.12	1	2	16	23	14
Strategy 11 (Current Information)	3.80	.90	.12	1	2	17	23	13
Strategy 12 (Anticipate)	4.01	.77	.10	0	1	13	26	16
Strategy 13(Present later)	3.98	.75	.10	0	0	16	25	15
Strategy 14 (Reading goals)	3.98	.79	.11	0	1	17	24	14
Strategy 15 (Draw)	3.87	.93	.13	1	3	13	24	15
Strategy 16 (Back)	4.01	.82	.11	0	2	12	25	17
<u>Pragmatic Reading Strategies</u>								
Strategy 1 (Note)	3.91	.95	.12	1	2	16	19	18
Strategy 2 (Highlight)	3.98	.77	.10	0	1	14	26	15
Strategy 3 (Margin)	3.96	.808	.10	0	1	16	23	16
Strategy 4 (Underline)	3.87	.97	.13	1	4	12	23	16
Strategy 5 (Read more)	3.76	1.07	.14	2	4	16	17	17
Strategy 6 (Re-read)	4.00	.89	.11	1	1	13	23	18

Analysis of Control Group and Experimental Group: Mean scores of the Pre-test and post-test of both the groups (EG and CG) were interpreted through the paired t-tests. In Table 4, the pre-test mean of the control group was 6.4464 and the pre-test mean of the experimental group is 6.0536 where the N means

the total number of participants which is 56. From the mean score, it is evident that there is a significant improvement in the mean scores of the experimental group in the post-test when compared to their pre-test. Whereas there is no significant difference in the mean scores of the control group in pre-test and post-test.

Table 4. Paired sample statistics

Paired t-test		Mean	N	Std. Deviation	Std. Error Mean
Control Group	Pre-test	6.4464	56	2.27971	.30464
	Post-test	6.6607	56	2.16817	.28973
Experimental Group	Pre-test	6.0536	56	2.46000	.32873
	Post-test	15.8393	56	1.60428	.21438

In the paired sample test, the p-value of the control group is .265 (Table 5) which is $p > .05$, hence null hypothesis is accepted and it is concluded that there is no significant difference in the mean scores of the control group in their pre-test and post-test. The p-value of the experimental group is .000 (Table 5)

which is $p < .05$, hence the null hypothesis is rejected, and it is concluded that there is a significant difference in the mean scores of the experimental group in their pre-test and post-test as an alternate hypothesis. Paired samples test of the control group and experimental group were tabulated below.

An independent t-test (Table 5) was performed to analyze the post-test scores of the experimental group and control group. The post-test mean value of the control group was 6.6607, whereas the post-test mean of the experimental group was 15.8393. In the independent t-test, the p-value of the post-test scores of the experimental group and control group was

.000 ($p < .05$), hence it is concluded that there was a significant the difference in the scores of post-tests among the experimental group and control group. The experimental group showed significant improvement due to the intervention of metacognitive reading strategies.

Table 5. Paired samples test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence interval of the difference				
				Lower	Upper			
Control Group (Pre-test – Post-test)	-2.1429	1.42337	.19021	-.59547	.16689	-1.127	55	.265
Experimental Group (Pre-test – Post-test)	-9.7857	2.94627	.39371	-10.57473	-8.99670	-24.855	55	.000

CONCLUSION

The findings of the study imply that metacognitive reading strategies have a positive outcome on the learner's reading comprehension skills as suggested by many studies (Vianty, 2007; Becirovic et al., 2017; Gavora et al., 2020; Pradita, 2020) which also employs metacognitive reading strategies in improving the reading skill. The study does not find the influence of the gender gap in reading as suggested in Pradita (2020). However, in the present study, both males and females showed a positive response in using the metacognitive reading strategies in the comprehension activities. As mentioned in the study of Vives et al. (2021) cognition and cognitive processing were poor among individuals with the psychosomatic condition. As mentioned by Taraban et al. (2013), learners had difficulty comprehending the text as it is not their native language. Since the participants were from the Vellore region, India, the learners displayed less comprehension in their initial tests. After the intervention, the learners showed significant improvement in their progressive tests.

The findings of the study show that metacognitive reading strategies have increased the learners' cognitive capabilities and cognitive processing by improving their reading skills among learners with psychosomatic condition. Metacognitive reading strategies have aided them to overcome cognitive disabilities and the learners have developed the reading strategies. Considering the mean values learners showed greater interest in using analytic strategies over pragmatic strategies while doing their activity. However, after the intervention learners frequently employed both analytic and pragmatic strategies in their reading comprehension exercises. The study is limited to tertiary learners, and the study was carried out in the Vellore region. Based on the implication drawn from the study, further research can be carried out on other intensive strategies, with a larger number of samples and a greater number of reading comprehension exercises that could be created for each strategy. The research could also be carried out in other countries or rural areas. Reading levels of learners might differ between rural and urban areas.

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Appendix - Pre-questionnaire and Post-questionnaire

Metacognitive Reading Strategies Questionnaire						
Analytical Component		1	2	3	4	5
1	Evaluation. I evaluate the information to comprehend the text.					
2	Anticipation. I anticipate the knowledge which I have acquired by reading the text.					
3	Drawing information. I draw the information from the text and employ my knowledge to comprehend the text.					
4	Reading back again. I read the text again to comprehend the textual content.					
5	Revision strategy. I use revision to answer my doubts about the given text.					
6	Considering again. I consider examining my comprehension of the text and reading it again.					
7	Distinguishing. I distinguish the knowledge which priorly acquired from the text information.					
8	Inferring. When information critical to my understanding of the text is not directly stated, I try to infer that information from the text.					
9	Reading goals. I fulfill my goals when I read the text					
10	Searching. I search for new knowledge from the given text.					
11	Prediction. I predict the information which will be presented in the latter part of the text through formerly available information.					
12	Meaning/Synonyms. I analyze the meaning of the words or sentences in the text.					
13	Immediate Comprehension. I analyze whether I comprehend the text as I read through it.					
14	Reading Strengths. I use my reading strengths to analyze and comprehend the text.					
15	Visualizing descriptions. I visualize the descriptions to comprehend the text.					
16	Noting Hard words. I always note the level of the text					
Pragmatic Strategies						
17	Taking Notes. I take notes while reading the text.					
18	Highlighting I highlight the specific points to comprehend the text.					
19	Margin. I always note the information in the margin to understand the text effectively.					
20	Underline I underline the text to comprehend it effectively.					
21	Reading again or more. I read the text, again and again, to comprehend the knowledge accurately.					
22	Re-reading. I re-read the text when I have difficulty reading the text.					

Adapted from Taraban, R., Kerr, M., & Rynearson, K. (2004). Analytic and pragmatic factors in college students' metacognitive reading strategies. *Reading Psychology*, 25(2), 67-81. doi: 10.1080/02702710490435547



EDUCATIONAL MODELS FOR THE INTERNATIONAL CONTRACT FOR THE AVOIDANCE OF DOUBLE TAXATION - with emphasis on the countries of the Western Balkans

Original scientific paper

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ABSTRACT

The purpose of the manuscript is limited exclusively to assessing the role and legal nature of the international contract for the avoidance of double taxation. The subject of the analysis of this paper is the avoidance of the phenomenon of double international taxation through the conclusion and ratification of specific international contracts. These contracts, especially for countries claiming EU membership, should be established through the harmonization of tax legislation and recognized practices of EU member states. Based on the reports of the Western Balkan countries, there is an intensification of energies and strategies for EU membership. Kosovo and other countries in this area have signed a Stabilization and Association Agreement (SAA). This fact has increased the turnover of people and businesses in Western Europe. Challenges in the future are the problems in the field of numerous techniques and methodologies related to the drafting of contracts because countries outside the EU are applying non-unified standards regarding the avoidance of double taxation. Nowadays, this topic has aroused interest in the tax system of Kosovo, having in consideration its commitment to full membership in international integration.

Keywords: international legal contracts, bilateral, double taxation, evasion, tax evasion

INTRODUCTION

One of the effects of internationalization is the fact that the borders of the state territory are less and less an obstacle for the movement of people from one area of the state to another (Waldinger, 2021). From this point of view, it is becoming more and more common for citizens residing in one country to be employed in another country, for companies based in one country to open businesses and operate in the territory of other countries, to inherit property abroad. Whilst, the commodity-money transactions as well as consumption are carried out in the state in the area where the participants in these operations do not have their place of residence or headquarters, etc (Polova et al., 2022).

When it comes to a cross-border economic activity or another activity, it usually results in an increase in the economic power of the actors undertaking the activity. This increase in economic power occurs in the form of income, profits, dividends, interest, real estate, movable property or rights and is subject to tax. Therefore, tax regulations (laws and bylaws) of two or more states, as well as international agreements apply. The issues of taxation of certain cross-border activities of natural and legal persons are subjects in the context of global trends. In general, taxes, fees and related phenomena can significantly affect such an activity, most often in terms of their de-stimulation (Bostan, Mihaela Tofan, & AndIonel, 2022).

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Cross-border transactions by definition imply the existence of an international element in doing business, which in turn means that in such cases there will almost always be the operation of at least two tax systems of at least two countries (González, 2021).

Therefore, this work aims to provide the interested professional and scientific national public with an overview of the means, methods, and consequences of such actions, as well as the means and methods of preventing the undesirable consequences of taxation based on the existence of an international element. Most EU countries have double taxation agreements with many other countries to ensure that people do not pay double taxation on the same income. A double taxation contract determines which country is entitled to tax an individual. If both countries have the same right, the contract determines which country has an advantage. Contracts may set different rules for different types of revenue.

The subject of analysis of this topic is exclusively limited to the legal nature and the effects that international contracts have for the avoidance of double taxation as a means of preventing international double taxation or its consequences, which may result in “tax evasion”, respectively pertaining to the transfer of capital and assets. This recommends that achievements in this area, urgently, should be undertaken through the process of harmonization of tax legislation in accordance with the legislation and practices of EU member states dedicated to this area. Nowadays, the topic of the tax system of certain states is considered to be important, having considered their commitment to membership and international integration.

BEGINNINGS OF THE IMPLEMENTATION OF INTERNATIONAL CONTRACTS FOR THE AVOIDANCE OF DOUBLE TAXATION

Although the history of the beginnings of international relations and the legislation governing the scope of double taxation dates back to around the 15th century, the aspect of international contracts related to this issue is a recent reality. In Europe, such international contracts appeared only at the end of the XIX century. Initially, such acts were concluded between members of the federal states, e.g. between Prussia and Saxony in 1869 and also between Austria and Hungary in 1869 (Arnold, 2020).

After the First World War, after an exponential increase in income tax revenues in Europe, the importance of the issue of international double taxation increased. One of the first treaties concluded in Europe was the 1925 treaty between Italy and Germany and the 1922 respectively, 1928 treaty between England and Ireland (Torrance, 2020).

The Anglo-Saxon states at the time were still reluctant to enter into treaties of this kind. Furthermore, the Secretary of the Treasury of the United States, expressed his disagreement with the implementation of international treaties in the prevention of double international taxation.

According to him, such agreements more often offered concessions to participants in international trade than the application of prudent tax principles. Thus, the United States concluded the first agreement on the avoidance of double international taxation in 1939 with Sweden and France alone (Carroll, 1969). After the Second World War, due to the emergence of integration processes, there was an increase in interest, theory, and financial practice on the issue of international double taxation, as well as the need to take certain measures, the implementation of which would prevent the emergence of such a tax, hence, would reduce its intensity.

ACTUALITY OF THE INTERNATIONAL CONTRACT FOR THE AVOIDANCE OF DOUBLE TAXATION

Today, more than 1000 international contracts for the avoidance of double taxation are in force in the world, of which over a hundred are concluded only between EU member states (Sztajerowska, 2021).

Most often, these are bilateral agreements. Among the multilateral treaties, which are very rare, are the Vienna Agreement on Diplomatic Relations, concluded in 1961 (VCDR, 1961), and the Vienna Agreement on Consular Relations, 1963 (Arnold, 2020). The two treaties contain provisions regarding the avoidance of double taxation.

Today's international treaties for the avoidance of double taxation are an expression of the mutual will of the signatory states to establish a regulated bilateral system of waiver of tax rights and to differentiate tax relief in a way that excludes double taxation. Recent contracts of this type, in addition to avoiding double taxation, also contain restrictions on the possibility of tax evasion.

International contracts for the avoidance of double taxation are in no way the legal basis on which state parties may introduce a new right on taxation. But, they only through the system of norms of a certain model contract, limit the conflict of the taxation facts. Through these international treaties the signatory states assume that the taxes which one of the contracting states has the exclusive right to collect will not be levied by the other contracting state or will be levied only to a limited extent. The legal effect of such an obligation can be described in different ways. It can be said that it is about: “*factual tax exemption*”, “*tax relief*”, “*waiver of the state from tax*”, or “*division of the tax source between the contracting states*”.

Each of these descriptions is equally valid and accurate. However, it would be wrong to say that international double taxation treaties share the “right to tax” between the contracting states and that the “right to tax” does not exist in itself. This is because the authority of the state to collect the tax derives from its sovereignty and the treaty cannot revoke the sovereignty: it can only force the state not to use it fully or to limit it (Provencher, Godbout, & St-Cerny, 2021).

When concluding an international contract for the avoidance of double taxation, the signatories taking over a certain obligation. This obligation consists in a full or partial waiver of the tax of a certain contractual fact. How the signatories of the contract will fulfill these obligations is their issue. They have the possibility, for example, to amend domestic regulations in such a way as to cover the facts which are the subject of an agreement on the avoidance of double international taxation or which they may regard as part of domestic law and apply them directly. In that case, the provisions of the contract for tax exemptions or tax benefits will have the effect of special provisions.

The procedure for concluding and enforcing international contracts for the avoidance of double taxation, as well as all other international agreements, are regulated by acts of a special branch of international law. That division is based on some general principles of common law for all agreements between each subject. Most of the norms of this branch of international law have already been codified (Tofan, 2021).

The Vienna Convention on the Law of Treaties, signed on 23 May 1969 and entered into force on 27 January 1980, is considered to be the most important treaty concerning codification of international law (VCLT, 1969). And, this convention is applicable in Kosovo as well as in other countries of the Western Balkans (Qerimi & Istrefi, 2016). The provisions of this Convention have taken on objective significance and almost all have grown into rules of general customary international law, which no one disputes.

The provisions of the Constitution of each signatory state apply to treaties for the avoidance of double international taxation, as well as to all other international treaties. In addition, they are subject to national regulations for the conclusion of international agreements, to the provisions of the Charter of the United Nations relating to international agreements, and to other international regulations.

The purpose of the described international contracts is to avoid or limit double taxation, however. So, what kind of avoidance or restriction of double international tax is intended, it depends from the system of norms of the above-mentioned treaties (Navarro, 2022). It is about the tax, which is a consequence of the conflict of tax principles and refers to the same or similar taxes imposed by the tax authorities of different countries on the income and property of the same tax subject. In no case, these agreements may not serve to ensure the non-taxation (so-called “non-double taxation”) of residents or of non-resident states parties (Leduc & Michielse, 2021).

THE ROLE OF INTERNATIONAL CONTRACTS FOR THE AVOIDANCE OF DOUBLE TAXATION

Bilateral contracts concluded between two countries either according to the OECD model or the UN model must respect the specifics of the contracting countries and in the case of EU member states must also respect EU legislation.

Their purpose is not only to avoid double taxation but, also to provide substantial tax insurance in one of the contracting states in accordance with the provisions of the contract.

Most Western Balkan countries, including Kosovo, base double tax avoidance contracts on the OECD model, which was established within the OECD in 1963 and amended in 1977 (OECD, 2019). This model has served as the backbone of almost all existing bilateral agreements to avoid double international taxation. But it should be noted that each of the agreements includes solutions that reflect some specifics related to the contracting countries.

The structure of the international double tax avoidance contract, modeled on the OECD agreement, was created to initially define the object of the agreement and the basic principle is that the agreement applies only to persons resident in one or both contracting states. Individuals can use the benefits guaranteed by the contract, then explain the terms of the contract (general definitions, definitions of resident and permanent establishment), and then is enlightened the tax treatment of certain types of income and property (OECD, 2019).

The OECD contract model has 31 articles and an important part of the structure are of course the double tax avoidance methods (method of exemption, method of calculation), followed by special and final provisions (OECD, 2019).

Provisions for the partition of tax rights between the contracting states are given in Articles 6 to 22, with the exception of Article 9, which has to do with companies concerning the issue of price transfer. That is, to avoid double taxation of the same income, profits or property, it is determined which contracting state has the exclusive right to tax or which right is given to both states (OECD, 2019).

THE LEGAL NATURE OF THE INTERNATIONAL CONTRACT FOR THE AVOIDANCE OF DOUBLE TAXATION

As noted above, there are two models on which international contracts for the avoidance of double taxation are drawn up: the OECD Model - Income and Capital Tax Convention and the United Nations Model - Tax Convention. Regardless of their model, international contracts for the avoidance of double taxation in legal terms belong to the set of rules, which according to their name are international legal acts (Larsen & Brøgger, 2021).

The rule applies to international contracts, that “... *if they have political content or change the law with their content, they are applicable in the national territory only with the approval of the national parliament*” (Djanani, 1998.). Since the content of the provisions of the international contract for the avoidance of double taxation often differs from the national tax law which implies the amendment of the national law or at least some of its provisions, it is a condition that for their implementation in a national territory they must pass through their ratification in the national parliament.

In order to categorize international contracts for the avoidance of double taxation as legal rules "*lex specialis*", it is necessary to fulfil two assumptions (Bröhmer, 2020). First, contracts must contain the same factual elements as national regulations (for example, that the person earning personal income is a taxpayer), and second, they must contain another factual element, on the basis of which national law imposes legal consequences other than those provided for by national law (for example, property consisting of immovable property owned by a resident of a contracting state and situated in the other contracting state may be taxed in that other state (Bröhmer, 2020)). Therefore, these contracts contain two sets of factual elements, such are: elements included in national legal regulations and elements specifically defined in the contract.

The interpretation of the international contract for the avoidance of double taxation emphasizes, in addition to the principle of "*lex specialis derogat legi generali*" and the principle "*lex posterior derogat legi priori*", according to which a subsequently adopted legal rule derogates from an earlier rule (Cheng, 2021). In this regard, the question arises whether the later legalized tax facts, which are also essential elements of the contract, enjoy an advantage over the previously established rules of the contract (abrogation of the contract).

There are different views on the answer to this question, as well as on its implementation. According to one view, if a contract is seen as an agreement of the contracting states, which has reached a compromise between their conflicting interests, then all the provisions of the contract should be interpreted as a whole. Specifically, the contracting states waive some other such rights at the expense of some recognized rights. This is why a contract can only be included in national law in its entirety. Otherwise, each of the contractors may be harmed in the rights guaranteed by the contract. Therefore, the provisions adopted later should not change the provisions of the contract that entered into force earlier. In addition, in accordance with the principle of "*pacta sunt servanda*", the contracting states have not only the right but also the duty to stand along with the contractual provisions (Arnold, 2020).

However, practice shows that states do not always accept such an attitude and that, when required by certain circumstances, the provisions of a subsequent law recognize the right of precedence over the provisions of the contract, or avoid it. In that case, they invoke a provision of the contract which entitles them to cancel it fully at a later date. Although there are differing views on the validity of the effects of these agreements on national tax law, one has been agreed upon.

Thus, it is generally accepted that an international agreement on the avoidance of double taxation may not be the legal basis for the introduction of a new additional tax liability, which was not enshrined in national tax legislation before its expiry (Freedman & Loutzenhiser, 2022). Independently, calling for an agreement on the avoidance of double international taxation, there is no legal norm that would prohibit, neither at the level of international nor constitutional law.

Under the international double taxation treaty, member states undertake to limit rights of each other's taxation. Therefore, contracts operate in the legal systems of the contracting states by limiting the tax facts set out in their national regulations (Bhattacharya & Stotsky, 2022).

International agreements on the avoidance of double taxation, in principle, improve the position of the taxpayer. However, this does not mean that, in some cases, the implementation of the contract cannot cause deterioration of its condition (Polonskaya, 2022). By implementing the contract, certain incomes that are not subject to taxation under national law, should not remain untaxed. For example, under the national law of a contracting state, certain incomes are taxed only after deducting the expenses necessary for its realization.

However, based on international contracts for the avoidance of double taxation, income is taxable and without prior deduction for expenses. Therefore, with the implementation of the contract, the position of the taxpayer is worse than it would be implementing national legislation (Silvera, Hizazi, Hidayat, & Rahayu, 2022).

Under an international agreement on the avoidance of double taxation, the contracting states undertake that, if one of them waives the collection of a particular tax, the other contracting state shall collect that financial input (Savitskiy, 2021). However, if a contracting state with a right to collect taxes does not exercise that right, that tax may not be levied by the other contracting state because it has waived its collection.

In this case, although this is contrary to the purpose of the international contract for the avoidance of double taxation, the implementation of the respective act may result not only in the elimination of double taxation, but also in the opposite - non-taxation of double.

CONCLUSION

One of the biggest obstacles to the free movement of capital and goods in international transactions is the double taxation, which occurs when a tax is paid more than once on the same taxable income or assets. The only reason double taxation exists today is because there is almost no direct tax harmonization between the tax systems of different countries, even within the European Union (Römgens & Roland, 2022).

Double taxation in a cross-border context, as a result of the unstable interaction of different national tax systems, is a real obstacle and challenge for the internal market. The imposition of comparable taxes in two (or more) member states on the same business activity is a serious obstacle to the need for free movement in the concept of the internal market (European Commission, 2017).

At the country level, the method chosen to avoid double taxation depends mainly on general tax policies and its tax structures. When it comes to developing countries, usually the methods used in developed countries are not very suitable for them.

The importance of the topic of double taxation in certain countries is explained by the fact that the recovery system in all countries is different and this in reality, to a certain extent, promotes the phenomenon of tax evasion. International agreements on the avoidance of double taxation are usually concluded to evade this phenomenon. In cases of international transactions or events in which, each for himself, claims to tax the same profit/income or property, and aims to distribute tax rights including the prevention and elimination of tax evasion in international transactions.

In international tax law, it is common for business transaction invoices to be submitted to one of the contracting states through a system of distribution rules agreed upon by the two contracting states. On the other hand, European Union law does not deal with the balance of tax revenues of the two countries but aims to create a single market guaranteeing fundamental freedoms. Therefore, both the double taxation treaty and the EU treaty have a common goal of reducing barriers to cross-border economic activity. The network of double taxation treaties in the international context is the most important mechanism for eliminating double taxation in the EU, although this is not entirely possible. Therefore, it remains in the competence of the member states to conclude agreements on the avoidance of double taxation, in accordance with the legislation of the European Union.

The rules for concluding a contract are defined by: 1. The law on the conclusion and execution of international agreements, from the initial initiative until the entry into force of the agreement and 2. The Vienna Convention on the Law of Treaties.

The legal nature of these contracts is characterized by the fact that we are dealing with international agreements that countries enter into to avoid double standards by avoiding paying tax twice for the same transaction. The content of these contracts determines the right of the contracting states for full or partial taxation of certain income and sets out rules for resolving the status of their taxpayers, tax sources, and taxable persons. Certain provisions regulate the manner of exchange of data between tax authorities, administration, and conditions for a more favorable exchange of goods, services, labor, and capital between the two countries. After all, their purpose is to prevent evasion and tax avoidance, payment of taxes, if it is a miscalculation of prices on transfers, or another form of tax evasion.

The nature of international contracts for the avoidance of double taxation is also characterized by the fact that they have greater legal force (above the law) than domestic legal acts at the moment when they go through a ratification process. This in almost all Western Balkan countries is regulated by constitutional provisions because they are considered to be part of the domestic legal order. International contracts for the avoidance of double taxation do not preclude the application of domestic legislation but may limit it, for instance, when a double taxation contract reduces tax rates as required by domestic tax laws. Furthermore, they determine the division of tax law between the Contracting States.

The provisions of the contract for the avoidance of double taxation apply only to residents of a contracting state. Residents of third countries cannot use it according to the validity of the contract.

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THE IMPACT OF THE SUPPORT SERVICE “PROGRAMME OF MENTAL ARITHMETIC” ON THE QUALITY OF LIFE OF THE ELDERLY IN INSTITUTIONAL ACCOMMODATION

Original scientific paper

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ABSTRACT

The aim of the research was to determine whether the innovative support service “ Programme of mental arithmetic ” has positive effects on the cognitive abilities and the satisfaction of life of the elderly in institutional accommodation. New support services for the elderly are rarely developed, so it is expected that in addition to the direct positive effects on cognitive abilities, there are also indirect effects on the perception of life satisfaction. The study involved 60 elderly people, divided into control and experimental groups. Cognitive abilities were tested using the Montreal Cognitive Assessment (MoCA) test and life satisfaction by using the Satisfaction with Life Scale (SWLS). An increase in scores was found on both instruments after the program was conducted in the experimental group. The scores of the control group did not change significantly.

Keywords: *mental arithmetic, support service, elderly, abacus, cognitive abilities*

INTRODUCTION

Aging, as a part of human life, deserves its equal place in society especially today when human life has lengthened and the quality of life has enabled the elderly people to follow the changes and maintain the freshness of the spirit until old age or the end of life (Span, 2013).

Gerontology centers take care mainly and primarily for the physical health and social care of the elderly. This takes place mainly through services that are similar in all institutions of this type. Physical and cognitive limitations, but also inadequate offer of content intended for elder people in institutional accommodation, lead to a situation of lack of choice and creating a sense of objectification (Milosavljevic, 2011). Rarely are new services and innovative content and therapies developed that would enable older people to have a better quality of life.

Since physical deterioration in older people is more noticeable than cognitive decline, new programs are developed much more often, which strive to prevent physical deterioration (Dragojlovic-Ruzicic et al, 2015), as opposed to cognitive decline.

Also, most rehabilitation programs available to the elderly are focused exclusively on health goals, and no account is taken of whether the person likes to participate in such activities. Given that rehabilitation procedures in old age are an integral part of life, care should be taken to ensure that the activities within these procedures are attractive to the elderly.

Therefore, there is a need to create programs that have a dual character. A program for the elderly should simultaneously provide a therapeutic effect while improving satisfaction and quality of life.

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At the College of Social Work, a support service has been developed that includes a program of training cognitive abilities through the use of mental arithmetic. When developing this program, we considered that the program should be efficient in preserving the cognitive abilities of the elderly and at the same time to contribute to their satisfaction and quality of life.

Mental arithmetic is a traditional discipline developed as a result of many years of work by psychologists, pedagogues, and other experts in the field of education. This discipline uses the ancient Japanese abacus as a tool with the help of which the arithmetic operations of addition, subtraction, multiplication, and division are performed. The idea is to develop the ability to imagine or visualize an abacus and achieve remarkably fast computation abilities. This method of work is currently very popular in children's educational process. However elderly people are not expected to fully develop mental arithmetic skills, but the whole process is expected to improve or maintain cognitive abilities and quality of life. The aim of this research is to determine whether the support service "Program of mental arithmetic" improves the cognitive abilities and quality of life of the elderly. We expect that the elderly will enjoy the program and that the program will contribute to the socialization of users of the institution's services.

METHODS

The research was conducted at the Gerontology Center "Novi Sad", Serbia. The institution gave approval for the research, and each of the participants included in the research gave consent for participation. Conducting the research involved several steps. The examiner (special educator rehabilitator – occupational therapist) filled out a specially designed questionnaire for all clients of the institution based on data contained in the institutional databases. Based on the inclusive criteria, participants agreement, and the need to balance the sample, 60 participants were selected. The Montreal Cognitive Assessment and The Satisfaction with Life Scale were conducted on the selected sample before including an experimental group in the "Programme of mental arithmetic". After an initial assessment, participants of the experimental group were included in the "Programme of mental arithmetic" for a period of six weeks, while both control and experimental groups continued with other regular activities (occupational therapy, physical exercises, workshops, etc.) within the institution. After a period of six weeks, the same examiner conducted a reassessment on all instruments, followed by statistical analysis and results interpretation.

Sample

The inclusive criterion for the sample was that the person resides permanently in the institution (Gerontology Center "Novi Sad") and that they do not have associated diseases that may affect the results of the research (eg mental health diseases, sensory impairments that prevent participation in assessment or assessment, dementia, etc.).

The sample consisted of 60 participants, average age of 74.53 (SD = 7.30). The minimum number of years of participants was 65, and the maximal number of years was 90. Nearly half (45%) of the sample were men. 36 participants had lower and primary education (60%), 14 participants had secondary education (23.3%), and higher education 10 participants (16.7%).

The sample was divided into two groups, equal by the number of participants. The control and experimental group were balanced by gender, age, and level of education.

Assessment tools

General data were obtained by a Specially designed questionnaire. The questionnaire included information on gender, age, education level, and health status.

The Montreal Cognitive Assessment (MoCA) is a test for the quickly assessment of cognitive skills. The test includes the domains: attention and concentration, executive functions, memory, language visuo-constructive skills, conceptualization, and orientation. The total score ranges from 0 to 30 points, and a cut score of 26. The Montreal Cognitive Assessment has adequate psychometric properties as a screening instrument for the detection of mild cognitive impairment. The MoCA shows an overall stable hierarchical factorial structure and a satisfactory general factor saturation (Sala et al., 2020).

The Satisfaction with Life Scale (SWLS) was used to assess general satisfaction with the participant's life as a whole. The SWLS is shown to be a valid and reliable measure of life satisfaction, suited for use with a different age groups (Pavot & Diener, 1993). It consists of 5-items. Participants indicate how much they agree or disagree with each of the 5 items using a 7-point scale that ranges from 7 strongly agree to 1 strongly disagree. Scoring should be kept continuous (summing up scores on each item).

Description of "Programme of mental arithmetic"

The support service "Programme of mental arithmetic" consists of 3 parts. The first part is learning to use abacus and to solve simple mathematical operations like addition and subtraction with one or multiple digit numbers. The participants sat in a semicircle and always in the same place. The instructor, who led the session, was positioned in front of the participants. Each of the participants had his own abacus, and in addition to the abacus, the trainer used paper and pencil, which served him for additional explanations. The rules used to perform arithmetic operations were written on the board next to the instructor. As the new rule was introduced, it would be added to the board. The duration intended for these activities is 45 minutes. Mental arithmetic is also part of the program and is intended to last 10 minutes. It is organized in the same manner as the direct work with an abacus. The participants had the task to imagine an abacus in their head and add or subtract numbers with the help of the rules that were mastered in the previous and given session.

At the end of the program, the participants did physical dynamic and relaxation exercises in a sitting position for 10 minutes. The goal is to stimulate blood circulation and promote relaxation after a period in which participants did not move much because they had to be concentrated on the task ahead. The sessions were conducted twice a week during the period of six weeks and always took place in the occupational therapy room at the same time of a day.

Data analysis

SPSS (Statistical Package for the Social Sciences), version 22. was used for statistical data processing. Descriptive statistics and the t-test of repeated measurements were used as statistical methods. Data are presented in tabular form.

RESULTS

The average values of the scores on the Montreal Cognitive Assessment (MoCA) and the Satisfaction with Life Scale (SWLS) are presented in Table 1. The average values of the scores on individual tasks of the Montreal Cognitive Assessment (MoCA) are presented in Table 2. A paired samples t-test was conducted to evaluate the impact of the intervention on experimental group participants' scores on the Montreal Cognitive Assessment (MoCA).

There was a statistically significant increase in MoCA scores from before the training application (M = 16.83, SD = 2.89) to after training application (M = 18.40, SD = 2.98), $t(29) = -3.47, p < .0005$ (two-tailed) in experimental group. The mean increase in MoCA scores was -1.57 with a 95% confidence interval ranging from -2.49 to -.64. The eta squared statistic (.29) indicated a large effect size (Table 1).

There was not a statistically significant changes in MoCA scores from time of test (M = 14.33, SD = 5.33) to time of re-test (M = 13.80, SD = 5.60), $t(29) = 1.43, p = .16$ (two-tailed) in the control group (Table 1).

A paired samples t-test was conducted to evaluate the impact of the intervention on experimental and control participants' scores on the Satisfaction with Life Scale (SWLS). There was a statistically significant increase in SWLC scores from before the training application (M = 22.47, SD = 2.22) to after training application (M = 23.63, SD = 2.34), $t(29) = -4.59, p < .0005$ (two-tailed) in experimental group. The mean increase in SWLC scores was -1.17 with a 95% confidence interval ranging from -1.69 to -.65. The eta squared statistic (.72) indicated a large effect size (Table 1).

There was not a statistically significant changes in SWLC scores from time of test (M = 22.53, SD = 3.25) to time of re-test (M = 22.43, SD = 2.54), $t(29) = .22, p = .83$ (two-tailed) in control group (Table 1).

Table 1. Differences in the scores of the control and experimental groups on the assessment instruments

Instrument	Control	Experimental
The Montreal Cognitive Assessment (MoCA)	14.33 (5.33)	16.83 (2.89)
The Montreal Cognitive Assessment (MoCA) Retest	13.80 (5.60)	18.40 (2.98) *
The Satisfaction with Life Scale (SWLS)	22.53 (3.25)	22.46 (2.22)
The Satisfaction with Life Scale (SWLS) Retest	22.43 (2.54)	23.63 (2.34) *

*p < .05

A paired samples t-test was conducted to evaluate the impact of the intervention on experimental group participants' scores on individual tasks of the Montreal Cognitive Assessment (MoCA). Table 2 shows significant results according to statistical analysis of the t-test.

Significant differences were found in the scores on the following tasks: Visuoconstructional Skills (Clock), Memory: Immediate recall I, Memory: Immediate recall II, Delayed recall.

Table 2. Differences in the scores of the experimental group on the MoCA tasks before and after the intervention

MoCA tasks	Before intervention	After intervention
Alternating Trail Making	.07 (.25)	1.33 (.35)
Visuoconstructional Skills (Cube)	.13 (.35)	.17 (.38)
Visuoconstructional Skills (Clock) *	1.30 (.84)	1.83 (.65)
Naming	2.80 (.48)	2.90 (.40)
Memory: Immediate recall I*	3.90 (1.27)	4.40 (.93)
Memory: Immediate recall II*	4.20 (1.21)	4.60 (.86)
Attention	5.50 (.78)	5.37 (.72)
Sentence repetition	.93 (.82)	.93 (.82)
Verbal fluency	.67 (.25)	.67 (.25)
Abstraction	1.10 (.80)	1.03 (.85)
Delayed recall*	.80 (1.32)	1.53 (1.76)

*p < .05

DISCUSSION

The analysis of the obtained results showed that there is a statistically significant difference in the scores of participants in the control and experimental groups on the instruments used, which indicates a possible positive impact of service on cognitive abilities and quality of life of the elderly.

Programme of mental arithmetic and cognitive skills

The results of our research confirmed that there is an improvement in cognitive performance in the elderly after the implementation of the support service "Program of mental arithmetic" in institutionalized accommodation. Comparing the scores on individual tasks before and after the implementation of the program, we found a significant increase in scores on visuo-constructional, memory, and delayed recall tasks. On most other tasks, we find higher scores after the program, but without a statistical indication of significance. Since the scores of the control group did not differ significantly on the MoCA test at the time when the experimental group was not yet involved in training and the time after the experimental group ended training participation speaks in favor of the importance of mental arithmetic training for improvement of cognitive skills in elderly.

Although the program of mental arithmetic we developed is unique in its adaptation to the elderly, there are programs of other authors who have shown a positive impact of abacus training on cognitive abilities. Matias-Guiu, Perez-Martinez, and Matias-Guiu (2016) developed the BrainFactory program, which is based on programs designed to adopt mental arithmetic in children, and applied it to people aged 60 and over. Improvements were found in scores on the Mini-Mental State Examination (MMSE) test that assesses cognitive status, after the training process. This test, although it has less ability to detect finer changes in cognitive status than the MoCA, also confirmed the effectiveness of mental arithmetic programs on the cognitive status of the elderly. The same authors emphasize in the interpretation of their results that their intervention involved stimulation of cognitive functions such as visuospatial skills, working memory, executive function, and episodic and semantic memory. Within our research, a significant increase in MoCA scores after training was observed in the field of visuospatial skills and memory.

In a larger study conducted by Hu et al. (2017), 198 participants aged between 52 and 92 years who participated in mental arithmetic training over a period of 3 months showed improvements in cognitive abilities measured on the MoCA instrument. Most participants, even those with cognitive impairment, improved their cognitive function, particularly in attention, visuoconstructional functions, and delayed recall. In our study, we did not find significantly better performance on the attention tasks.

The reason for this can be found in the shorter time of implementation of the program in our study. The other results of Hu et al. (2017) are in agreement with the ones we got.

A review paper published in 2021 (Lima-Silva et al., 2021) states that data from 29 studies of which 8 aimed to identify the effect of abacus-based mental calculation (AMC) for different age groups and to determine its applicability as a method of cognitive stimulation for older adults showed that programs of mental arithmetic are promising in terms of the rehabilitation of cognitive abilities. Within these studies, AMCs are mainly designed in such a manner that allows participants to learn to use the physical abacus and after achieving proficiency they try to perform calculations using a mental image of the device, manipulating the beads of the so-called mental abacus. Our training is the only one that takes into account the satisfaction of the elderly as well as other aspects of health. Our program is the only one that in the final segment contains dynamic and relaxation exercises adapted to the elderly. This makes our programme innovative because it prevents the process of dehumanization during the rehabilitation process. In addition to the assessment of cognitive abilities at the end of the program, we are equally interested in the impact of the program on the quality of life of users of the institution.

Programme of mental arithmetic and quality of life

The authors of the mental arithmetic programs generally did not examine the effects of the program outside the domain of cognitive abilities. The only research that examined user satisfaction with mental arithmetic training was conducted by Matias-Guiu, Perez-Martinez, and Matias-Guiu, (2016). After completing the cognitive stimulation program, usability and satisfaction were measured with an analog scale ranging from 1 to 1. Usability was evaluated with the question "Did you find it easy to complete the stimulation program?". Satisfaction was assessed with the question "What is your level of satisfaction with the BrainFactory method?".

We believe that this approach is justified, but we believe that the quality of support services must be analyzed through a much broader framework. The quality of life largely depends on the health condition, as well as the preservation of cognitive functions (Cankovic et al., 2016; Ivanovic & Trgovcevic, 2018). Deteriorating health often leads to depression in the elderly (Urosevic et al., 2016; Radevic et al., 2019). Institutionalized accommodation provides various services in order to maintain the health of the elderly, however, the innovation of these services is slow, so the routine and unsuitability of services to individuals can reduce a person's motivation to participate (Nedovic et al., 2019). We hypothesized that in such conditions, our mental arithmetic program, which was developed in accordance with the needs of the elderly, could have a very motivating effect that could be reflected in the scores of the Satisfaction with Life Scale.

Increasing scores on SLWS after an intervention may indicate that an approach to foster innovation of support services could be important for the quality of life of users. It is necessary to conduct research on the adaptation of services to the individual needs of users, but also on the impact of the dynamics of new services on the quality of life of the elderly.

CONCLUSIONS

The mental arithmetic program developed at the College of Social Work, Belgrade has shown positive effects on the cognitive status of the elderly in institutional accommodation. We believe that the innovativeness of the program has contributed to the degree of life satisfaction among the users of the institution. As the perception of quality of life as a secondary effect of support service or treatment is insufficiently researched concept, further research is needed. We believe that it should be emphasized that this study had certain limitations in the size of the sample and the duration of the intervention, so these limitations should be taken into account when interpreting the results.

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INFLUENCE OF COGNITIVE AND SITUATIONAL MOTOR SKILLS IN SPORTS GAMES ON PRIMARY SCHOOL STUDENTS

Original scientific paper

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ABSTRACT

When it comes to sports (volleyball, handball, basketball, football ...) the main value is reflected in their attractiveness, wide application, and availability. At the same time, these are sports of higher achievements (top sport), sports entertainment is an important mean of active rest (recreation) and, of course, one of the most powerful means of physical education. The popularity of sports games is especially pronounced among school children and youth. In addition to compulsory physical education classes, they are widely represented in free sports activities. As it is known among other anthropological dimensions, cognitive abilities have a significant impact in achieving top results in sports. The aim of this study is to determine the relationship between a set of predictor variables of cognitive abilities and a set of criterion variables of situational motor abilities in sports games, especially in volleyball in primary school boys. By analyzing the corresponding canonical functions in the space of cognitive abilities, the function is defined by all variables, as well as by another set of data, the function is defined by all situational motor variables. As all cognitive abilities are in direct proportionality with the results of situational motor skills tests, it can be concluded that subjects with higher spatialisation ability and higher IQ will have good results in specific motor, especially in volleyball. These results are logical considering the structure of performing exercises from sports games especially volleyball, which require good coordination of movements, which is directly related to cognitive abilities.

Keywords: relations, cognitive abilities, situational-motor abilities, sports, volleyball, students

INTRODUCTION

The development of the complete anthropological status of students is one of the fundamental imperatives in the teaching of physical education (Ibri & Shala, 2012). School children have greater opportunities to participate in various forms of organized, programmed exercise. Achieving this goal is possible only with extensive knowledge of internal relations and the degree of conditionality of a number of specific dimensions of human bio-psycho-social status. Only on the basis of such generated and scientifically proven knowledge it is possible to plan and program the contents of the work that will qualitatively enable the fulfillment of the authentic needs of each individual, as a priority goal of pedagogical activity (Findak, 1999).

A lot of research has been done in studying the structure of cognitive abilities, but there are still different approaches in the theoretical approach to studying the nature and structure of human abilities. (Blaskovic, Milanovic & Matkovic, 1982). Cognitive (intellectual, mental) processes within Plato, the formed psychological trinomial (cognition-affectation-conation) are the most intensively studied processes in psychology and pedagogy. The intellect, as the center of these processes, despite such efforts, remains insufficiently known. Today, a large number of games are known in which sports competitions are regularly organized (Sabotic, 2005).

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The existence of numerous conceptions about the types of cognitive functioning, despite the long research tradition in this field, remains an obvious confirmation of this statement (Bosnar & Matkovic, 1983). Cognitive abilities are usually understood as the global capacity of an individual to act decisively, to think rationally and to fit effectively into the environment, that is, as a complex of conditions for special achievement (Babiak, 1984). Therefore, cognitive abilities are complex in nature, so depending on which component is given the greatest importance, intelligence is differently defined as the ability to adapt an individual to the environment, as the ability to learn or as the ability to think abstractly (Lanc, 1972).

SUBJECT AND GOAL OF RESEARCH

The subject of this research included 620 respondents from the school population between 14 and 15 years of age. The problems under investigation are taken from the substructure of anthropological status, namely cognitive abilities, and specific motor abilities. It is assumed that these substructures are very important in predicting success in mastering situational motor information, or specific movement habits in sports games, especially in volleyball. Starting from the problem and the subject of research, the aim of this paper is to determine the connections between the set of predictor variables of cognitive abilities and the set of criterion variables of situational motor information in primary and secondary school students in hearing impaired sports in volleyball.

METHODS

Entity sample

The sample consists of 620 respondents from the ninth grade of primary schools in Prizren, between 14 and 15 years of age, who regularly attended physical education classes and who were familiar with the elements of technology from sports games especially volleyball in physical education classes, respondents at the time of testing were healthy and without visible motor and psychological deviations.

Sample variables

Starting from the subject and goal of the research, two sets of variables marked as a sample of cognitive variables and a sample of situational motor variables were applied. A sample of variables for assessing cognitive abilities:

1. Antonyms Synonym Test (AL-4)
2. Image comparison test (IT-1)
3. Spatialization test (S-1)
4. Total IQ Test

A sample of variables for situational motor skills in volleyball:

1. Bounce the ball with your fingers against the wall for 30 seconds (BBFAW)
2. Bounce the ball with your forearms against the wall in 30 seconds (BBFAW)
3. Precision Network Serving (PNS)

Description of the experimental approach

For the purposes of this paper, testing was conducted on a sample of 620 ninth-grade elementary school students age 14-15 who regularly attended physical education classes and who were familiar with the elements of techniques from sports games of volleyball in physical education classes. The management and teachers in primary schools of physical education approved the implementation of this research. Before conducting the research, the respondents were acquainted with the course of the research, its goals and purpose, and each respondent gave consent, which is in accordance with the ethical code of the research. Testing was conducted in physical education classes and was conducted by a group of trained physical education teachers. The room in which the measurement was carried out was sufficiently lit and tempered.

Data processing methods

Canonical correlation analysis calculated the relationship between a set of variables for the assessment of cognitive abilities and a set of variables for the assessment of situational motor abilities in the sports game of volleyball. The data were processed by the statistical package “Statistic for Windows 21”.

RESULTS AND DISCUSSION

Relationships of cognitive abilities with situational-motor abilities

As expected, canonical correlation analysis showed that there is one significant association between a set of variables for assessing cognitive abilities and a set of variables for assessing situational motor abilities in a volleyball sport. As can be seen from Table 1, which shows data on the significance of all obtained canonical functions, this single significant function explains 11% of the total covariance of these two sets of variables, which can be considered a very low degree of correlation, regardless of the sample respondents large enough.

Table 1. Relationships of cognitive abilities with situational-motor abilities in volleyball

Canonical function	Canonical R	Canonical R-sqr.	Chi-sqr.	df	p
1	.333	.111	27.53	12	.006
2	.103	.011	2.68	6	.848
3	.044	.002	.40	2	.818

Table 2 shows the correlation coefficients of the manifest variables in both sets with an isolated canonical function. In the space of cognitive abilities, function is defined by all variables. The tests of synonyms of antonyms (AL-4 = .94) and the total coefficient of intelligence (IQ = .80) have the greatest contribution to the definition of this factor. The image comparison test also has a medium high projection on the canonical function (IT-1 = .62), while the spatialization test (S-1 = .26) has a low projection on the canonical factor, but it is statistically significant. This factor can be defined as a factor of general cognitive ability, with the influence synonymous antonym test.

In the second data set, the function is positively defined by all situational motor variables. The highest projection on the canonical factor is the variable bounce of the ball with the fingers against the wall in 30 seconds (BBFAW = .98), bounce of the ball with the forearms against the wall in 30 seconds (BBFAW =

.60), and precision of serving over the net (PNS = .32). The analysis of corresponding canonical functions suggests that the successful performance of specific motor movements in volleyball depends mostly on the ability of synonyms of antonyms, since the projections of this test are high and in direct correlation with the canonical function. Also, the variables of general intelligence and the comparison of images are highly projected on the canonical function, so their influence on the results of situational-motor tests in volleyball is very high. As all cognitive abilities are in direct proportionality with the results of tests of situational-motor abilities of respondents, it can be concluded that respondents with greater synonymous of antonyms and higher IQ will have better results in tests of specific motor skills in volleyball. Such results are also logical considering the structure of performing volleyball exercises, which require good coordination of movements, which is directly related to intelligence.

Table 2. Factor structure of cognitive abilities and situational-motor abilities in volleyball

Variable	Canonical factor 1	Variable	Canonical factor 1
IT-1	.62	BBFAW	.98
AL-4	.94	BBFAW	.60
S-1	.26	PNS	.32
IQ	.80		

CONCLUSION

Canonical correlation analysis showed that there is a significant correlation between a set of variables for assessing cognitive abilities and a set of variables for assessing situational motor skills among boys in volleyball, this is a significant function of all variables. The greatest contribution to defining this factor have the tests of synonyms of antonyms (AL-4 = .94) and the total coefficient of intelligence (IQ = .80). This factor can be defined as a factor of general cognitive ability. In the second data set, the function is positively defined by all situational motor variables. The analysis of the corresponding canonical functions suggests that the successful performance of specific motor movements in volleyball mostly depends on the ability of synonymous of antonyms. Also, the variables of general intelligence and image comparison are highly projected on the canonical function, so their influence on the results of situational motor tests in volleyball is very high. As all cognitive abilities are in direct proportionality with the results of tests of situational-motor abilities of respondents, it can be concluded that respondents with the greater synonymous ability with antonyms and higher IQ will have better results in tests of specific motor skills in volleyball. Such results are also logical considering the structure of performing volleyball exercises, which require good coordination of movements, which is directly related to intelligence. The results of this research will serve researchers who deal with the problem of predicting results in sports games as a basis for further research and obtaining answers to questions that this research did not cover. This primarily refers to the choice of variables that are used to influence the results in sports games, as well as the age of the respondents.

Based on the obtained results, a proposal of measures should be made which would significantly improve the current situation and create more favorable and deserved conditions required for school physical education of sports games including volleyball.

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THE LEADERSHIP OF HUMAN RESOURCE TRAINING AND THEIR IMPACT ON ORGANISATIONAL PERFORMANCE

Original scientific paper

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ABSTRACT

The aims of this paper are to contribute to the deepening of research in this field in SEE countries, but also the application of appropriate knowledge in organizations, to increase performance, improve organizational culture, strengthen leadership of human resource management. The paper examines the factors that affect employee motivation and encourages the understanding that continuous improvement of knowledge can achieve high results that would reflect on their professional success and personal needs, as well as on the business of the organization. The paper is realized in accordance with the contemporary principles of scientific-research work. In the analysis, special attention was paid to the works and attitude research results show a significant positive correlation between attitude towards company goals and attitude towards leading training, as well as development of human resource function and attitude towards training.

Keywords: leadership, training, performance, HRM

INTRODUCTION

If people are the most important source for achieving competitive advantage, and if employees are a key factor in the success or failure of the organization, then it is necessary to invest in their knowledge, skills, and abilities, organizations must have a strategy of developed learning and according to their business goals. Training and development support the organizational vision, mission and strategic goals by enabling positive changes in the knowledge, skills, behaviours and attitudes of employees that will be reflected in performance at work, which in this way improves, contributes to overall organizational performance and the creation of a positive organizational climate. In organizations where the training process is carefully researched and matched to its goals, the concept of "Learning Organization" is accepted, where employees constantly learn new things, apply what

they have learned to improve products and services, exchange knowledge, react quickly to change and have the ability to retain what they have learned.

The subject of this paper is the impact of training and education on the success of the organization and employee satisfaction. The starting point is the fact that knowledge is the basic power and capital and the generator of development, i.e. a key development resource, but at the same time a human need and an important motivating factor.

The subject of this paper is the analysis of the role of the human resources function in the organization and implementation of education and training as one of its practices in companies operating in the Peja region. In the context of this analysis, the author seeks to determine the impact of training and education on organizational performance and employee satisfaction

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and whether they are consistent with strategic goals and integrated into the human resource management function.

The purpose of this research is to identify the factors and conditions of the impact of education and training on employee satisfaction as well as on the overall performance of the organization and the relationship with strategic goals. This paper examines the conditions and circumstances for improving and intensifying the practice of education and continuing professional training of employees as a basis for changing and achieving the strategic goals of the organization. The paper examines the factors that affect employee motivation and encourages the understanding that continuous improvement of knowledge can achieve high results that would reflect on their professional success and personal needs, as well as on the business of the organization. The starting point is that a clear understanding of the factors and conditions in which training can be an investment, not a cost, can encourage company management and human resource professionals to organize this activity to contribute more to the goals of company and employee needs. One of the aims of this paper is to contribute to the deepening of research in this field in our country, but also the application of appropriate knowledge in organizations, to increase performance, improve organizational culture, strengthen human resource management practices, resources, motivate employees and contribute to the improvement of business results and the development of human capital. It should be borne in mind that the level in Serbia has not yet been exceeded.

“Leadership and Personnel management” in the practice of human resource management, as a reality that needs to change. The author of the research in this thesis emphasizes that we need to change the practice and awareness of both employees and management about the role of training and the importance of the management function of people in achieving business success, so that people are really a key factor. in achieving competitive advantage.

THEORETICAL BACKGROUND

Leading training in the context of leadership and human resource management

To support an ongoing competitive advantage, it is necessary to develop and invest in specific skills, to give them an edge over the overall capabilities that give the organization the same value as the competition. So it becomes a challenge for human resource management (Talat, Dildar, Ishfaq, Misbah, & Sadiq, 2021). A human resource system should be developed that will create a synergistic effect and not a set of individual independent human resource functions. The result of the work should be greater than the sum of the individual results and combining individual skills with new qualitative organizational skills (Kragt & Guenter, 2018).

This requires a change in the traditional view of HRM sub-functions (recruitment, selection, training, evaluation, development, benefits, etc.) in a view where these independent sub-functions are perceived as interconnected system components, which are complementary and not opposites, which competition is not can identify and copy and because of such a relationship they can be an advantage (Pfajfar, Shoham, Malecka, Zalaznik, 2022) (Figure 1).

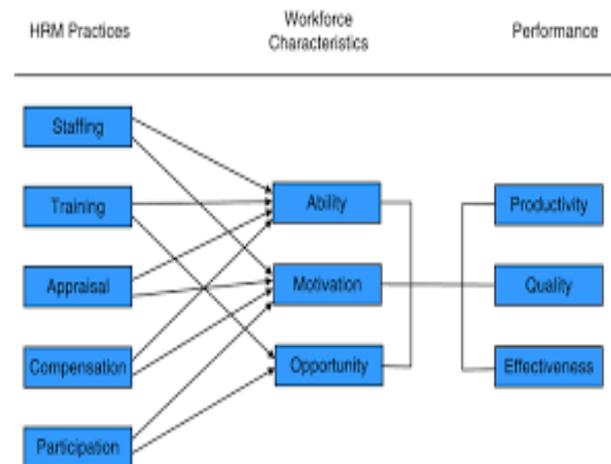


Figure 1. Interdependence and complementarity of HRM practices

Since in this paper we talk about the impact of training and education on employee performance and satisfaction, we will look at how training and education can affect the interdependence and complementarity of HRM practices (Figure 1). Recruitment faces new and growing challenges: such as the lack of a skilled workforce, the importance of a “talent fight” important to an organization that wants to be and remain a market leader, attracting a skilled workforce, diverse, etc. In order to apply for jobs as many quality, talented and skilled workers, the company must have a good image (Luu, 2022).

The impact of training on the company’s image would be reflected in providing timely, targeted and quality training that will result in better performance leading to promotions, higher salaries, better benefits affecting satisfaction and motivation of employees. If senior management towards training and education is positive and the company is valuable, and employees will personally work in an atmosphere where employees who go to training are favored and rewarded, this will inevitably affect the company’s reputation, which makes the company desirable. a job and it is logical to apply a larger number of quality people who want such an environment and thus the selection will be easier (Al-Swidi, Gelaidan, & Saleh, 2021). At the beginning of the selection, new employees go through training that gives them, if they do not already have, the basic skills and knowledge to get the job done (De Stefano, Bagdadli, & Camuffo, 2018). Also, recruitment and selection staff can be trained on how to effectively conduct an interview in the selection of candidates who possess competencies from the pre-defined list of desirable competencies for the position for which they are applying. Inadequately selected selection sets requirements for correction through training.

The better the educational process is done and the employees master what they have learned, the better the performance will be automatically evaluated. If the performance of employees, based on the given criteria, is evaluated well, it means that the whole process of the training program was adequate and well performed, and vice versa, if the performance is poorly evaluated, it is one of the signals to review the educational process or create a new program. Employees need to know more “How to do something”, instead of knowing “why” and “whom”, and this will be achieved by developing and applying skills, knowledge and skills that can contribute to the company’s business (Wilson, Kandege, Edjoukou, & Teklu, 2021). To learn to know “why” and to know “whom”, it is necessary to emphasize continuous learning. When information is obtained about their interests, weaknesses and strengths in knowledge skills, they can be provided with additional education to develop their career (Raelin, 2021). To retain and motivate employees, a system should be established to recognize and meet the developmental needs of employees so that the training function can give its maximum contribution to the provision of educational programs where they will increase knowledge, skills and abilities for advancement in career. Those in charge of training will educate managers about the importance of the support they should give to employee development through specific tasks, job rotation, training delivery, and so on (Stankeviciute & Savaneviciene, 2018).

Training is increasingly linked to employee compensation through an ability-based payment system⁶³. In skill-based payment systems, the salary is determined primarily in relation to the knowledge and skills possessed by the employee, and not in the knowledge and skills needed to successfully perform the actual job. In this way, employees are motivated to attend trainings. Such a payroll system requires a constant assessment of skills and knowledge performance, to ensure that employees are qualified in the skills they have learned in training programs (Salas-Vallina, Alegre, Lopez-Cabrales, 2021). As can be seen from the above, all HRM initiatives should function holistically and be in a close relationship, because only in that way will it affect organizational performance and achieve competitive advantage (Ardichvili, 2019)

METHODOLOGY

The paper is realized in accordance with the contemporary principles of scientific-research work. In the analysis, special attention was paid to the works and attitudes of Peters, Kirkpatrick, Javis, Noah, Becker, Alliger, Goldstein, Kozlowski, Bandur, Wright, Barney, Davenport, Sengi, Pržulj, Šiber-Bahtijarević, Bogicevic, etc.

In the process of validation, i.e. testing of established hypotheses, confirmatory research was conducted based on a questionnaire that included important indicators for examining the impact of education/training on the performance of the organization and employee satisfaction.

The survey was conducted using an appropriate survey submitted to employees, via the internet/email. Through the research, a comparative analysis of the characteristics of the theoretical concept and practice of human resource management has been made. The following methods have been used in the theoretical analysis: a content analysis of domestic and foreign literature; descriptive methods; comparative methods, analysis and synthesis techniques, and statistical methods.

Organizing and conducting research

The research was conducted in the period June-October 2021. The research was conducted using the online survey method (the survey was posted at: <https://docs.google.com/forms/d/1L4FGGVrtrQA3xbcdidTkO5piAKMxmVEA3oh80iohI69xf5>) layered of 18 activities of different companies and different properties. operating in the Peja region. The link was sent to 320 e-mail addresses., 256 respondents responded, which is 75%.

For the needs of the research, and in accordance with the topic, goals, and hypotheses of the work, a questionnaire was constructed, which in addition to data on socio-demographic variables and data on the company in which the respondents are employed, contains 43 articles, answers to which are listed, which serve to assess the different attitudes that are relevant to examining the impact of education/training on the performance of the organization in which the respondents are employed. The statistical methods used for data processing, within the SPSS package v. 19, are descriptive statistics, analysis of variance and Pearson correlation coefficient, and Cronbach’s Alpha scale.

The results of Cronbach’s Alpha test showed that there is a high degree of reliability (reliability) of using the Likert scale to measure attitudes in the questionnaire used, which can be seen in Table 1.

Table 1. Cronbach’s Alpha test, Reliability Statistics

Cronbach’s Alpha	Cronbach’s Alpha Based on Standardized Items	N of Items
.642	.612	28

Independent variables

- 1) Sociodemographic variables
 - a) Gender,
 - b) Age,
 - c) Readiness for school,
 - d) Position in the company (manager, middle manager and operational executive),
 - e) Practice in society.
- 2) Organizational structure
 - a) Company size (small, medium, and large).
 - b) Ownership structure (private enterprise with domestic capital, private enterprise with mixture of domestic and foreign capital, private enterprise with foreign capital and state/public enterprise).

3) Structure and development of the human resources service

- a) Existence of a human resources department.
- b) Development of the human resources department (through five questions in the survey, the attitude of the respondents about the human resources department within their companies and its role was examined, to determine how much contribution and influence the human resources department has in planning of company goals, in achieving the best results, in identifying, organizing and implementing trainings, as well as monitoring the career development of employees).

4) Employee attitudes towards management in the management of the company support the business policy as well as their commitment, and to what extent they direct the development and motivation of employees towards achieving these common goals)

5) Employees attitudes towards the company's goals (respondents' assessment, within four questions, to understand the basic vision and mission of the company in which they work, how clearly explained to them, and how much each employee can contribute to achieving of business goals and to what extent expect it).

Dependent variables

The attitude of employees towards training (observed through the average value of the total evaluation point of the respondents for the five segments of training in the company where they work, and for this purpose 29 questions were compiled in the questionnaire):

- a) Adequacy of training (respondents' attitude to the degree to which they receive the necessary training and how satisfied they are with it);
- b) The impact of training on motivation (respondents' attitude about how much training they receive affects their motivation and job satisfaction, sense of job security, better earnings and understanding of their contribution to company success);

c) Impact of training on job performance (respondents' assessment of how training affects their productivity, knowledge, responsibility, quality of job performance, willingness to accept more difficult tasks, and a better understanding of values and opportunities of the company for advancement).

RESEARCH ANALYSES AND DISCUSSIONS

The survey was completed by far more women (75%) than men, which can probably be explained by the nature of the activities of the organizations where the respondents come from. In addition to the opportunity to have more women employed than men, it is possible that women were more willing to complete the survey than men.

Table 2. Respodent structure

	Frequency	Percent
Male	64	25.0
Female	192	75.0
Total	256	100.0

- There is a significant difference between men and women when it comes to training, as men have a more positive attitude towards training and its role than women.

- Men also have a more positive attitude towards company management than women, ie they believe that management encourages employee development and supports business policy towards achieving common goals.

The correlation between respondents' gender and attitudes observed showed a significant correlation between gender and attitudes towards management (.004) and training (.013), which can be seen in Table 3.

Table 3. Gender ratio of respondents to training, management, company goals - ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Leaderships and Human resource development	Between Groups	.713	1	.713	.692	.407
	Within Groups	186.638	181	1.031		
	Total	187.351	182			
Attitude towards leading training and its role	Between Groups	5.292	1	5.292	6.346	.013
	Within Groups	126.745	152			
	Total	132.037	153	834		
Attitude towards of leadrsshps	Between Groups	7.680	1	7.680	8.686	.004
	Within Groups	157.374	178	.884		
	Total	165.054	179			
Attitude towards of company goals	Between Groups	1.578	1	1.578	1.695	.195
	Within Groups	166.640	179	.931		
	Total	168.218	180			

Which is confirmed by the analysis of variance (where the mean value for m -3.48 and f - 3.10 by training, and by management: m - 3.79 and f - 3.37) can be seen in Table 4.

Table 4. Descriptive description of the gender of the respondents and attitudes towards the management, training, and goals of the company

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Upper Bound	Lower Bound		
Resource development Humane	Male	72	3.46	.95	.11	3.24	3.68	1.40	5.00
	Female	111	3.33	1.06	.10	3.13	3.53	1.00	5.00
	Total	183	3.38	1.01	.08	3.24	3.53	1.00	5.00
Attitude towards training	Male	62	3.48	.88	.11	3.26	3.70	1.33	5.00
	Female	92	3.10	.93	.10	2.91	3.30	1.07	5.00
	Total	154	3.25	.93	.07	3.11	3.40	1.07	5.00
Attitude towards management	Male	69	3.79	.89	.11	3.58	4.00	2.00	5.00
	Female	111	3.37	.97	.09	3.19	3.55	1.00	5.00
	Total	180	3.53	.96	.07	3.40	3.67	1.00	5.00
Attitude towards Purposes of company	Male	72	3.54	1.00	.12	3.31	3.78	1.00	5.00
	Female	109	3.35	.94	.09	3.17	3.53	1.00	5.00
	Total	181	3.43	.97	.07	3.29	3.57	1.00	5.00

The otherset of attitudes regarding the motivational aspect of training, the impact of training on job performance, as well as the appropriateness, purposefulness, ability of

his training, shows important links between the gender and motivational aspect of training .004 and training opportunities .037, as shown in Table 5.

Table 5. Reports and surveys of the suitability of training, aspects of motivation, effects of training on job performance, purpose of training and opportunities for training

		Sum of Squares	df	Mean Square	F	Sig.
Proper training	Between Groups	4.265	1	4.265	2.629	.107
	Within Groups	298.472	184	1.622		
	Total	302.737	185			
Motivational aspects of training	Between Groups	8.250	1	8.250	8.746	.004
	Within Groups	168.856	179	.943		
	Total	177.106	180			
Impact of training on Work Performances	Between Groups	2.167	1	2.167	2.286	.132
	Within Groups	163.062	172	.948		
	Total	165.229	173			
Comprehensive training	Between Groups	1.878	1	1.878	1.978	.161
	Within Groups	163.340	172	.950		
	Total	165.218	173			
Opportunity for training	Between Groups	4.776	1	4.776	4.429	.037
	Within Groups	184.418	171	1.078		
	Total	189.194	172			

If we look at the results expressed on the average values in the description - Table 6 (the average value of the relationship with the motivational effect of training is for m - 3.33 and f - 2.90, the average value for the gender ratio for training opportunities for m - 3.43 and f -3.09), we can say that:
 • Men see the motivational aspect of training more than women. In fact, male respondents are more likely to

believe that the training they receive has a positive effect on their motivation and understanding of their personal contribution to the company in which they work.

- Men also, to a greater extent than women, believe that the company offers them opportunities to improve and develop knowledge and skills through training.

Table 6. Descriptive description of the respondents' gender and attitudes towards the adequacy of the training, the motivational aspect of the training, the impact on the job performance, the purpose of the training and the training opportunities

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Upper Bound	Lower Bound		
Proper training	Male	73	3.22	1.27	.15	2.93	3.52	1.00	5.00
	Female	113	2.91	1.29	.12	2.68	3.15	1.00	5.00
	Total	186	3.08	1.28	.09	2.85	3.22	1.00	5.00
Motivational aspects of training	Male	73	3.33	.92	.11	3.12	3.55	1.40	5.00
	Female	108	2.90	1.00	.10	2.71	3.09	1.00	5.00
	Total	181	3.07	.99	.07	2.93	3.22	1.00	5.00
Impact of training on Work Performances	Male	69	3.68	.94	.11	3.45	3.91	1.13	5.00
	Female	105	3.45	.99	.10	3.26	3.64	1.00	5.00
	Total	174	3.54	.98	.07	3.40	3.69	1.00	5.00
Comprehensive training	Male	72	3.46	.91	.11	3.25	3.68	1.20	5.00
	Female	102	3.25	1.02	.10	3.05	3.45	1.00	5.00
	Total	174	3.34	.98	.07	3.19	3.49	1.00	5.00
Opportunity for training	Male	66	3.43	.98	.12	3.19	3.67	1.33	5.00
	Female	107	3.09	1.07	.10	2.88	3.30	1.00	5.00
	Total	173	3.22	1.05	.08	3.06	3.38	1.00	5.00

As can be seen from the overview of Table 7 slightly more than half of the respondents are between 31 and 40 years old, close to one third of the respondents are between 41 and 50 years old, while less than ten percent are younger than 30 years and older, 50 years. We can assume that the reason for this distribution in the age categories is in fact that the largest number of workers is from the age of 30 to 50 years.

Table 7. Age of respondents

	Frequency	Percent
Up to 30 vite	46	8.6
From 31 to 40 years	120	53.5
From 41 to 50 years	68	31.0
More than 50 years	32	7.0
Total	256	100.0

Tossi stated that in 2016 will be active 13% of the workforce aged 16-24 years, 64% aged 25-54 and 23% over 55 years. Given that this research was conducted in 2014/15, the socio-demographic picture fits this forecasts. The bab-boomers generation (born 1946-1964), active and, now they are between the ages of 52-60, they can still contribute to organizations performance through experience and there is no empirical evidence that it is more difficult for the older

generation to embrace innovation and new technologies. It is very important that the organization takes care of the knowledge, skills and abilities that this generation has pass on to younger employees so that it does not happen that with the retirement of older colleagues the tacit knowledge that is of great importance for the intellectual capital of the company. In terms of the millennial generation (born 1980-2000) and part of Generation X (born 1960-1980) who are now about 30 years old and under, 8% of the workforce at this age can be explained by longer education masters, specialized studies, etc. and later establish employment relationships. In any case, the potential of any company is Generation X, in which to invest by offering opportunities to attend training. Where should we consider the demands of the employees themselves, because that generation is mature and knows what it wants and in what way it wants to realize its potentials.

There is no significant relationship between employee age and perceptions of development and the role of human resources, as well as attitudes towards company management, company goals, training and its role, and in each segment measured when it comes to training. Suitability of training, motivational aspect of training, impact of training on job performance, purpose of training, opportunity for training), which can be seen in Table 8.

Table 8. The relationship between the age of the respondents and attitudes towards management, goals, training

		Adequacy of training	Motivational aspect of training	Impact of training on job performance	The training objectives	Training learships opportunities
Age	Pearson Correlation	.023	.003	-.029	-.076	.015
	Sig. (2-tailed)	.760	.969	.700	.321	.848
	N	256	256	254	254	253

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

I. Based on the results of the research, it can be said that the first research hypothesis was confirmed - The development of the human resource management function in the company has an impact on the planning, implementation and implementation of the educational program. It reflects a more positive attitude of employees towards training and its role and contributes to business success. As we said in the theoretical analysis, the Function/

Service for Human Resources must be holistic with all its functions, in order to expect positive performance results and have support in senior management, work in accordance with the strategy and get part in goal planning. The research results show a significant positive and stronger correlation (.675) between the development of the human resources service and the attitude towards training and its role, as shown in Table 9.

Table 9. The correlation between the leaderships development of the Human Resources Department and the attitude towards training

		Attitude towards the role of training	Development of the human resources sector
Attitude towards the role of training	Pearson Correlation	1	.675**
	Sig. (2-tailed)		.000
	N	154	153
Development of the human resources sector	Pearson Correlation	.675**	1
	Sig. (2-tailed)	.000	
	N	253	254

In the second half of the second segment (Table 10), the main correlation between the corrections of the SME organizations and the Departments of human resource according to training suitability (.571), .45 points, and

the aspect ratio, the number of permanences (.644) and the number of permanences (.621) The correlations and margins are positive and varied in terms of intensity and strength.

Table 10. Correlation between HR department development and training suitability, training motivational aspect, training impact on job performance, training suitability and training opportunities

	Development of the Human Resources Department	Adequacy of training	Motivational aspect of training	Impact of training on performance	The purpose of the training	Develop the Ability to Train
Correct HRM development						
Correlation	1	.571**	.562**	.473**	.644**	.621**
Sig. (2-tailed)		.000	.000	.000	.000	.000
N	256	256	254	256	251	256

II. The second hypothesis is fully substantiated. The hypothesis that there is a positive impact of training and education on employee motivation as well as job satisfaction was confirmed. Namely, already in the theoretical analysis of this thesis we have emphasized that a well-organized educational process, which takes into account the individual characteristics and motivation of participants in training, content, choice of training

methods, encouraging knowledge environment, conditions for transfer of employee learning motivation at work and greater job satisfaction, which is reflected in better performance. The results obtained show a significant correlation between attitude towards training and job satisfaction (.755) as well as the correlation of attitude that training affects motivation (.609), as shown in Table 11. Both correlations obtained are positive and strong.

Table 11. The correlation between attitude towards training and job satisfaction and the impact of training on motivation

	My job satisfaction increased after training/education	Training/education has a positive effect on my motivation
My job satisfaction increased after training/education		
Correlation	.755**	.609**
Sig. (2-tailed)	.000	.000
N	256	256

The main hypothesis
 The main hypothesis that Leading Training and education affect the performance of the organization if they are aligned with the strategic goals of the organization and integrated into the Human Resource Management Function. Namely, the research results show a significant positive correlation between attitude towards company goals and attitude towards training, as well as development of human resource function and attitude towards training. There is a slightly weaker correlation between the development of the human resources function and the attitude towards the company goals, as shown in the following table.

Thus, it can be said that education and training affect the performance of the organization if employees believe that there is alignment of training with the strategic goals of the organization and integration with the function of human resource management. In companies where employees are clearly presented with the basic strategic goals and have services related to employee development and nurture the training and education climate, employees will have a positive attitude towards training and will consider training and education and how they can improve productivity and performance of their organization.

Table 12. The correlation between the attitude towards the goals of the company and the attitude towards the training as well as the development of the human resources function and the attitude towards the training, the correlation between the development of the human resources function and the attitude towards the goals of the company

		Attitude towards training and its role	Attitude towards company goals	Development of the Human Resources Department
Attitude towards training and its role		1	.726**	.675**
	Sig. (2-tailed)		.000	.000
	N	256	253	253
Attitude towards company goals		.726**	1	.492**
	Sig. (2-tailed)	.000		.000
	N	256	256	256
Development of the Human Resources Department		.675**	.492**	1
	Sig. (2-tailed)	.000	.000	
	N	256	257	256

CONCLUSIONS

Although theorists and practitioners have been more concerned with the impact of training at the individual level, there has recently been an increase in the number of papers showing the large impact that training has on organizational performance. Of course, senior executives and stakeholders are more interested in training in quantitative-financial terms, its impact on profitability, because in this way they can measure the return on investment. but are slowly realizing that quality indicators are also important to an organization’s success. Some changes in the organizational aspect, such as the climate, reputation and culture of the organization, employee behaviors and attitudes, satisfaction, require little time and positive results in organizational goals come more slowly and are not measurable in number, but can affect the financial results again.

Training affects the individual, the organization and society as a whole. States are aware that the economic power of a country also depends on human capital. For a society to thrive, it must have quality human resources. Quality is also encouraged by investing in formal and non-formal education that contributes to the community as a whole. More and more countries have national policies where education/training is encouraged and encouraged at the national level. The purpose of such policies is to strengthen human capital through various types of training and education, which will result in economic prosperity.

The interest of the state is reflected in helping companies, where people spend more than half their lives, to help educate and develop employees through their national policies, and companies are realizing that investing in human capital development is not just survival/market issues. Also becomes socially responsible to communities and affects economic prosperity.

Many studies have confirmed that training has an impact on the organization as a whole and its benefits are reflected in improving organizational performance: profitability and business efficiency.

Analysis and research within this paper have shown that in the process of organizing education and training in organizations, certain conditions must be met for training to be understood as an investment and not as a cost. It is especially necessary for the organization to do the following:

- conduct an assessment of training needs at the organizational, task/job and individual level, using all available resources and experienced experts to ensure that the assessment is successful.

Training needs should be in line with the company’s strategy and goals. Everyone else in the series depends on this initial steps as a carefully select training participants and motivate them before, during and after training, all in order to maximize the effects of training;

~ in relation to the design of training, the organization should apply the theories on which the principles of learning are based; to motivate students before, during and after the educational process of adopting and implementing what is taught in the work environment. Develop an organizational culture that will encourage knowledge and reward it adequately; ~ in terms of performance, should use adequate methods and technologies to increase the effectiveness of training for both participants and the organization;

~ enable all relevant factors that will improve the transfer of learning to the workplace, make an assessment, which will measure the success or failure of the training in accordance with the needs identified at the beginning of the process and to do after the evaluation corrections to make future training effects even better in terms of organizational performance.

The training itself will have the greatest impact when packaged together with other human resource management practices and the human resource management function should be part of the management and involved from the outset in approving the strategy and defining the company goals. Employees and training will be treated as an expense until their relationship to business results is clearly established.

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IMPACT OF LEADERSHIP STYLES ON EMPLOYEE BEHAVIOR IN HEALTHCARE INSTITUTIONS DURING THE COVID-19

Original scientific paper

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ABSTRACT

The COVID-19 pandemic that hit the world during 2019 has set an enormous challenge for the healthcare industry in B&H as well as for the entire world. The Healthcare industry was forced to find new strategies overnight to survive. This study aims to investigate the impact of transactional and transformational leadership styles on employees' intention to stay in mediating the role of affective commitment in healthcare organizations in B&H during the COVID-19. This research has high implications for decreasing turnover in workplaces and increasing organizational commitment by contributing high commitment to the employees that will be more motivated and perform better. The data of the study were analyzed using SPSS (v20) software packages and mediation tests were applied, using 178 sample data from private healthcare institutions in B&H. The results indicate that effective commitment mediates the connection between transformational and transactional leadership and turnover intention.

Keywords: transactional leadership, transformational leadership, affective commitment, organizational commitment, COVID-19, healthcare

INTRODUCTION

Leadership is a topic that thrilled attention among individuals, especially employees. The term predicts images of dynamic, influential individuals who command winning armies or shape the sequence of nations (Yukl, 2013). It plays a significant role in developing organizations and the performance of their individuals. Stockholders should make the best goods and services from the resources available in an enterprise to get the most out of their investment by implementing strategic decisions at the same time. According to Yücel (2021), a leader should offer to their followers what they need to be as effective as possible and to achieve common organizational goals. If a leader fails to provide what they have promised, employees might be demotivated and lose self-confidence (Yücel, 2021).

Leaders must focus on employees' internal and external needs to improve their overall performance and at the same time to increase organizational commitment. Leadership is a field that has been seen since the first civilizations as a key factor in the success of smaller organizational units and even entire states. At the heart of this paper are transactional and transformational leadership styles, i.e., consideration of the impact of transactional and transformational leadership on employee organizational commitment with work and their loyalty and turnover intention to the organization. On 31 December 2019, the World Health Organization recognized the cases of pneumonia on an unspecified disease in Wuhan. Following the 7 January 2020, it was found in China and reported that coronavirus exists as "2019-nCoV".

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This worldwide situation led to an enormous and great reaction of people where everyone has been constantly reporting all over the borders to make society informed about the worldwide situation (Roy et al., 2020). Including a broad range of viruses, causing diseases from easy conditions like cold to more serious ones together with the strain that was not detected in the human body before represents coronavirus (nCoV). The World Health Organization called it the “COVID-19 virus”. It was known and affected all the countries around the world. During the COVID-19 pandemic, hospital employees in Bosnia and Herzegovina were faced difficult working conditions where they didn’t get a chance to take any kind of holiday, retire or resign. There were a lot of patients that needed medical care, hospitals were overbooked, employees were emotionally and physically exhausted. For healthcare institutions to succeed, discipline was required which at the same time requires consciousness. In Bosnia and Herzegovina, as in almost all other countries around the world, it was stated that people should not travel if they do not need to minimize virus spreading. When the lockdown was no more an option because of all the negative effects on the economy of the countries, countries were focusing on community actions like wearing masks in public, keeping social distance which started reducing COVID-19 spread and allowed healthcare institutions to deal and care for the patients. Restrictions like lockdowns, closing the borders, limiting commercial trade, move to work from home were some of the steps that were undertaken to deal with the problems of the pandemic. Then, such restrictions caused anxiety, stress, and other negative emotions and reduced the confidence of employees and their commitment levels.

We live in an era of uncertainty. Today’s economic situation tends to be unstable in most countries that resulting in a high unemployment rate, working force is faced with several challenges which directly lead to low productivity. To require a strong connection between managers and employees, the crisis management team plays an important role. A leader is meant to have a clear direction that is positive, aware of the world situation, and has sound argumentative abilities (Yücel, 2021). When we talk about leadership, they should respect and acknowledge the characteristics of their followers that are leading to greater engagement. Leaders as well are responsible for being agile and prioritizing requirements in order not to find themselves reacting to momentum. Information should be transferred rapidly to all levels of the institutions. Employees require respect and to get that respect, support for their mental, physical and emotional well-being leaders need to undertake certain actions. With interpersonal and emotional presence, workers tend to perform well to difficult and complex tasks. Each of the employees requires the respect they value by strengthening their work and enjoyment so they can adjust to the current working situation. Yücel (2021) stated that leadership is being understood as an instrument in which a person/individual influences a purpose throughout the ability

and its nature as well as leads the organization in a way that makes it more incorporated and intelligible. In his research, Yücel pointed out that knowledge and skills from leaders are connected to their attributes or traits, for instance, their way of perceiving ethics, beliefs, values, and character (Yücel, 2021). Leading and managing healthcare organizations in serious and difficult times is a demanding job when the leader’s power and position in a period of changeover take up a significant part. According to Yücel (2021), transformational leadership is a key factor for companies who are willing to progress essential changes before they inspire employees’ willingness so they can have an acceptable environment for adaptive or positive changes through progressions. In his study, Yücel (2021) stated that each leader should be authentic and willing to create shared confidence and ties by being an active listener with open communication and being able to accept any critique and advice. A leader inside the organization must perform well internally and externally, balance its capability with the inspired team and deliver perceptible and reliable support for organizational goals that focus on the company’s performance.

Numerous experiments were recognized in the literature during previous years in which investigators recognized overall managerial perceives which typical leaders use in regular times. They also highlighted basic practices that have important benefits in the process of leading a company to achieve exact goals (Ribeiro et al., 2018). Inside the organization, managers use a specific leadership style that has a direct impact on employees’ turnover intention.

Dimaculangan’s (2012) research study showed that transformational leadership (TL) was connected to employee turnover intention that showed to be decreased (Dimaculangan & Aguilin, 2012). The existing research replied to a demand for the investigation on “the mediating mechanism in the transformational leadership (TL) process” (Ariyabuddhiphongs & Kahn, 2017) as its mediation influences simplify the conditions beneath which transformational leadership is connected with results.

The aim of this study was projected to improve the theory of transactional and transformational leadership, which clarifies that the style of leaders of transformation and transaction might unfavorably impact the turnover intention to devote by affective organizational commitment mediation. This study observed the clarification of the transactional and transformational leadership style and its impact on the expectancy of the employees’ intention to stay and the mediatory impact of leaders’ success on the relationship between transformational and transactional leadership and the turnover intention. The main purpose of this study is to investigate the impact of transformational and transactional leadership style and its effect on the turnover intention that mediates the role of affective organizational commitment in healthcare institutions during COVID-19 pandemic in Bosnia and Herzegovina.

The goals of this research are following:

- (a) Evaluating the awareness of employees in healthcare institutions of their leaders' transformational and transactional leadership style and turnover intention together with the organizational commitment.
- (b) Investigating the leaders' transformational and transactional leadership style impact on the turnover intention of employees in healthcare institutions.
- (c) Evaluating the mediation of employee' affective organizational commitment on the relationship between transactional and transformational leadership and turnover intention.

The health sector is one of the basic public (or private) services provided by the state. This service is financed from public (or private) revenues through public expenditures, which have a continuous tendency to grow. Around the world, the health sector is facing major challenges due to rising standards, the needs of the population, and the growing life expectancy of the population, which are putting constant pressure on the growth of public expenditures and allocations for health.

LITERATURE REVIEW

Leadership

Burns (1978) believed leadership authority meant to be a relationship wherein followers and leaders promote each other to more significant levels of inspiration (Burns, 1978). Most of the leadership definitions reflect the assumption that it includes an interaction by which deliberate impact is applied over others to structure, guide, and work with exercises and connections in a gathering or association (Yukl, 2013). Leadership is at the top of the most researched concepts in management. Many people consider leadership to be synonymous, but they are not. Leadership is a narrower term than management, ie leadership is only a small part of management (Judge et al., 2004). Big changes are happening in the environment. These changes include changes in technology, work context, and many other areas because everything is changing. The only way management encourages managers to achieve results is to ensure the impact on employees which can be achieved through leadership because leadership, as well as motivation, is related to the presence of impact on employees.

People are still factors in production processes, and the way management works is to work with others. To stimulate employees to make additional efforts, they need to be encouraged to address their safety. In this way, important effects are achieved such as engagement, employee motivation, investment of additional effort by employees, and many other effects. For this reason, leadership research is very important and current today (McCall, 1986; Yukl, 2013). No matter what leadership everyone is researching, such research is still needed.

Two leadership styles were identified by Burns (1978): transactional and transformational (Burns, 1978).

Bass (1986) argued that transformational and transactional leadership styles are different concepts, and additionally argued that the greatest leaders are both transactional and transformational. In his research (1986), Bass introduced an instrument that is meant to measure those two leadership styles: transformational and transactional to research the potential connection between these two leadership styles and job performance satisfaction. The instrument that was developed was called the Multifactor Leadership Questionnaire known as MLQ (McCall, 1986). The MLQ instrument was empirically validated and conceptually developed to reflect the corresponding dimensions of transformational and transactional leadership styles. This instrument is the most widely used measure of transactional and transformational leadership style, and the same will be used for this research. Five dimensions were analyzed in the MLQ instrument of transactional and transformational leadership styles. Three of them were analyzed for transformational leadership dimension and defined as characteristics of such leaders (Bass et al., 1987): Charisma, Individualized Consideration, and Intellectual Stimulation. Two of them were analyzed for transactional leadership dimension and defined as characteristics of such leaders (Bass et al., 1987): Management by Exception and Contingent Reward. Each of these dimensions will be explained in the following sections.

Transformational leadership

Transformational leaders guarantee their followers' participation by visualizing attractive future states, presenting enthusiasm and optimism, encouraging followers to accomplish the organizational vision, and offering the resource needed for rising their potential (Dimaculangan & Aguilin, 2012). Transactional leaders are building a relationship with their followers to exchange something of value. On the other hand, transactional leaders work to change their followers' needs, values, and beliefs. (Kuhnert & Lewis, 1987). (Bass, 1999) mentioned in his study that the transformational leader stimulates, intellectually inspires, and is individually considerate. When talking about transformational leadership, it is important to mention that such leaders are letting followers express self-interests for the purpose of the group good as well as motivating them with the involvement of charisma and intellectual stimulation (McCall, 1986; Yukl, 2013). More precisely, a transformational leader identifies and clarifies the vision of an organization. These leaders tend to deliver an adequate model, increase the acceptance of the goals, assume efficient job performance, brings employees personalized support and provide knowledgeable motivation (Podsakoff et al., 1990). Much of the studies relied on the background of transformational leadership and its impact on individual and group outcomes (Judge et al., 2004). Research that was conducted by Eagly, Johannesen-Schmidt, and van Engen (2003), concluded that women as leaders are more transformational compared to men (Eagly et al., 2003).

A transformational leader inspires individuals to do more than one would initially hypothetically do by articulating a vision, promoting the acceptance of team and organizational goals, providing a proper role model, articulating high job performance expectations, providing individualized support, and inspiring intelligently (Podsakoff et al., 1990). Leaders that have a transformational leadership style inspire and motivate people and followers around them by providing challenge and sense to their followers' performance. These leaders are having high expectations from their followers and they hold them responsible for doing so (Dimaculangan & Aguilung, 2012).

Transactional leadership

In the previous years, a considerable research frame has accrued on transactional and transformational leadership theory. Burns (1978) was the first to introduce the basic concepts of transactional and transformational leadership. He concluded that the transactional leadership style requires an exchange among follower and leader (Burns, 1978). Followers obtain outcomes that are valued just like the wage and prestige when they perform their tasks according to the leader's desires. Bass (1986) took Burns's leadership studies as his initial point, where he noted that leadership has commonly been conceptualized as an exchange process that is cost-benefit or transactional (McCall, 1986). Just as transformational leaders serve a resolution that exceeds short-term goals, transactional leaders focus on the exchange of resources (Judge et al., 2004). Bass (1986) applied Burns' (1978) ideas and argued that transactional leadership style is the one where leaders usually consider how to slightly maintain and improve the quality and quantity of job performance, how to decrease the resistance to certain actions, how to substitute one goal for another and how to do the implementation of decisions in the organization (Burns, 1978; McCall, 1986). Bass (1986) concluded that transactional leadership is one that involves the process of exchange that might potentially result in follower compliance with the request of a leader. At the same time, it is not likely to create commitment and enthusiasm for the task objectives. This leadership style influences both leaders and followers so that each gets something of value. To simplify (McCall, 1986), transactional leadership style is the one where leaders offer and give to followers something they want and value in exchange for something leaders value and want (Yukl, 2013).

Comparison of transactional and transformational leadership style

Many research bodies in the past 20 years have accumulated in transactional and transformational leadership theory (Judge & Piccolo, 2004). The first concept that was introduced by Burns (1987) was of transactional and transformational leadership in the political treatment of leadership (Burns, 1978).

As per Conger and Kanungo (1998), transactional leaders emphasize on the exchange of resources whereas transformational leaders emphasize more on greater order intrinsic needs and purpose that exceeds short-term goals (Conger & Kanungo, 1998). According to Burns, the transactional leadership style is more usual and common compared to the transformational leadership style. To expand previous knowledge of leadership theories, Bass (according to Howell and Avolio, 1993) proposes a study of transformational leadership built on Burns' 1978 sorting of transactional and transformational leaders (Howell & Avolio, 1993). The transaction takes place in such a way that the manager explains to his employee what is expected of him in terms of doing the job, and for the work done the employee receives a kind of compensation (reward for good work, punishment for bad work). The problem with the transactional style of leadership, according to Bass (Bass & Avolio, 1990), is that it is questionable whether rewards and penalties motivate employees at all, which ultimately depends on whether the manager has the authority to award them at all and whether employees want rewards. As opposed to the transactional leadership style, Bass (1990) cites transformational leadership that yields superior results over transactional leadership. Transformational leadership according to Bass (1990) emerges when the manager expands and promotes the interests of employees who become aware of the common mission and accept it, putting the wider welfare before their interests (Bass & Avolio, 1990). Therefore, the point of transformational leadership is "to motivate co-workers to do more than they initially thought possible". Also, a very important feature of transformational leadership, according to Krishnan (2002), is the mutual raising of motivation and values of both leaders and followers, which results in the transformation of both leaders and followers who act to achieve a common vision and mission (Krishnan, 2002).

Affective Organizational Commitment

Many examinations concentrate on and indicate that organizational commitment in the companies is a peculiarity with multiple layers, and the focal point of commitment, to whom for sure an employee is appended, is a significant aspect in surveying worker commitment (Becker & Billings, 1993). As indicated by Meyer and Allen, the affective commitment of an individual has been characterized as a connection portrayed by a distinguishing proof to and inclusion in the organization (Lee et al., 2001). Affective organizational commitment represents the degree to which an employee is emotionally committed to an organization and refers to how much employees want to stay in the organization (Dixon et al., 2005). As employees may feel committed and attached to their organization as a whole, according to studies, they also can feel attached to their team members, or leaders (Becker & Billings, 1993; Clugston et al., 2000).

Meyer and Allen (1997) identified affective commitment as an attachment where employees are dedicated to the organization in which they feel like a part of it (Meyer & Allen, 1997). As a result of encouraging feelings that were perceived by a relationship with the company, workers owning high emotional attachment demand to continue being part of their organization (Newman & Sheikh, 2012). According to Meyer and Allen (1997), a meaningful precursor of affective commitment to the organization should be POS which refers to perceived organizational support that reflects employees' beliefs to which extent their organization perceives their involvement and take care of them. Affective commitment is frequently defined as the instrument used to measure employees' psychological affection for an organization (Albrecht & Marty, 2020).

Turnover intention

Turnover intention, as per Labrague (2018), alludes to the workers' willful withdrawal from the organization. As he clarified in his exploration there can be numerous noteworthy effects on the establishments and association as turnover might prompt low efficiency in medical services representatives, helpless medical services workers care, and added expenses for the foundation and organization (Labrague et al., 2018). Traditionally, employee turnover has been seen as negative action for the institutions because of the costs that go with each turnover. Today employee turnover intention has been viewed differently. March and Simon's model was the basic to describe turnover intention. According to March and Simon model, it was conducted from three basic partial determinants of employee turnover starting with the appeal of the movement, then ease of movement, and at the end, intentions to quit. Studies that were conducted before showed that employee performance, as well as organizational commitment, has impact on employee turnover intention (Yücel, 2021). The way that an individual can be connected to an institution through more than one mentality, and can encounter more than one type of responsibility at the same time, should be remembered for endeavors to comprehend and clarify the connection between different authority practices and the improvement of positive representative optional conduct (Afshari & Gibson, 2016).

In the Abrams (1998) study, they defined turnover intention as it is the key performance of workers as not being pleased with their job and mentioning their idea of leaving the organization and employee intention for looking after the new job (Abrams et al., 1998). According to Qin Lv's study, (2012) employee turnover intention in the context of healthcare organizations was focusing on the straight connection between employee turnover intention and their organizational commitment together with emotional exhaustion. The study concluded that the turnover intention can positively be predicted by both management and non-management employee emotional exhaustion.

In contrast, the study showed that the relationship between employee turnover intention and emotional labor strategies is weak. As the study is based on turnover intention, (Lv et al., 2012) concluded that emotional exhaustion will have an impact on turnover intention only through the emotional labour strategy (Lv et al., 2012). According to Eisenberger's study, organizational commitment refers to be the most important factor in a company because it positively affects on workers loyalty but according to his study, it was concluded that it negatively impacts employee turnover intention (Eisenberger et al., 2002). Moreover, the study concluded that the organization committee has high indications of organizational effectiveness and even higher indicators of turnover intention rather than job satisfaction and worker's performance. According to Parnell (Parnell & Hatem, 1997), organizational commitment negatively connects to employee turnover intention in the hospitality context. The study concluded that workers' organizational commitment negatively affects on worker's turnover intention.

Conceptual Framework and Hypothesis Development

Transformational and transactional leadership

MLQ (Multifactor Leadership Questionnaire) was utilized to quantify transactional and transformational leadership (McCall, 1986). MLQ includes ascertaining the two components of transactional leadership (active and passive management by exception and contingent reward) and include ascertaining the four components of transformational leadership (intellectual stimulation, idealized influence, individualized consideration, and inspirational motivation). The subjects of the study were asked to choose on a five-point scale that ranged from 1 "strongly disagree" to 5 "strongly agree" the degree to which their immediate leader takes part in any of these behaviours.

Affective commitment

For the measurement of affective organizational commitment, the three-component model of organizational commitment developed by Allen and Meyer (Meyer & Allen, 1997) was used. The model is composed of six-item versions of three forms of organizational commitment (Normative, Continuance, and Affective Commitment) out of which we used only items for the Affective commitment for this study. The subjects of the study were asked to choose on a five-point scale (ranging from 1 "strongly disagree" to 5 "strongly agree", the extent to which their relationship with an organization leader takes part in developing affective organizational commitment.

Turnover intention

For the measurement of turnover intention the three-item model was used developed by Bothma and Roodt) (Bothma & Roodt, 2013). The subjects were asked to choose the likelihood they would leave the organization on a five-point scale from 1 “strongly disagree” to 5 “strongly agree”.

Affective commitment mediates the relationship between Transformational leadership and Turnover Intention

Yücel (2021) examined the relationship between employee turnover intention and employee performance mediation and transformational leadership style in the relationship between transformational leadership style and their intention to stay (Yücel, 2021). He concluded that managers that have transformational leadership styles tend to lower the turnover intention of their employees through their job performance (Yücel, 2021). This study is having practical implications for healthcare institutions. In contrast, the transformational leadership prediction of employee turnover intention suggests that this leadership style, transformational leadership style, can be a precursor of worker’s job performance.

Mowday (1979) concluded that affective organizational commitment, that is on a high level, to an organization can potentially predict employee intention to stay (or turnover intention) (Mowday et al., 1979). (Bass & Riggio, 2006) as well concluded the positive relationship between affective commitment and transformational leadership and decreased turnover intention which satisfies followers desire and perceptions towards an organization. As per Leroy et al. (2012), the base to measure the connection between affective commitment and transformational leadership is so-called the social exchange theory (Leroy et al., 2012). Therefore, considering the previous discussion on the studies of transformational leadership predicting affective commitment and turnover intention, it was concluded that transformational leadership positively affects affective commitment and decreases turnover intention (Nuo & Hee, 2020).

Hypothesis 1 (H1): *Transformational leadership significant positive effect on affective commitment*

Hypothesis 2 (H2): *Affective commitment mediates the effect of transformational leadership on turnover intention*

Affective commitment mediates the relationship between Transactional leadership and Turnover Intention

Several research studies were conducted showing that transformational and transactional leadership are positively related to workers’ intentions to stay, commitment to the organization, outcomes of an organization, and their behavior (Judge & Piccolo, 2004).

Recent studies have concluded that organizational commitment is connected to outcomes of organizations and attitudes of employees (Closon et al., 2015). Considering all three components of the model of organizational commitment, the affective commitment tends to have a positive relationship to the employees and their intention to stay in an organization (Lee et al., 2001) and at the same time, it is related to the transactional leadership to turnover intention due to its validity and reliability. Several studies examined the connection between affective organizational commitment and transactional leadership (Epitropaki & Martin, 2005) and turnover intention (Nuo & Hee, 2020). In the study, Nuo and Hee (2020) concluded that as the affective organizational commitment positively affects transformational leadership, the same applies to the affective organizational commitment and transactional leadership. (Guntur et al., 2012) determined that affective commitment has the greatest impact on employee turnover intention and is the strongest in such relationship associated with other two components of organizational commitment (affective and normative). Therefore, considering the previous discussion on the studies of transactional leadership predicting turnover intention and affective commitment, it was concluded that transactional leadership positively affects affective organizational commitment and reduces the turnover intention (Nuo & Hee, 2020).

Hypothesis 3 (H3): *Transactional leadership has a significant positive effect on affective commitment*

Hypothesis 4 (H4): *Affective commitment mediates the effect of transactional leadership on turnover intention*

The direct effect of transformational leadership style on turnover intention

Yücel (2021) analyzed the connection between turnover intention and transformational leadership and the worker’s exhibition mediation in the relationship between employee turnover intention and transformational leadership style. His research showed that transformational leadership style predicts the worker turnover expectation contrarily. Yücel (2021) likewise reasoned that the transformational leadership style of higher chiefs will in general diminish workers’ turnover intention through their work execution (Yücel, 2021). In contrast, the transformational leadership prediction of employee turnover intention suggests that this leadership style, transformational leadership style, can be a precursor of worker’s job performance (Mowday et al., 1979). Previous studies observed that transformational leadership positively affects employees’ attitudes and their job performance like organization trust, job satisfaction, and at the same time organization commitment (Bono & Judge, 2003) but has negative effects on employee turnover intention (Nuo & Hee, 2020).

In the research of transactional and transformational leadership styles, Judge (Judge & Piccolo, 2004) concluded that those leadership styles are directly connected to the worker's activities such as their job performance, engagement, and turnover intention, and invest in the company.

Hypothesis 5 (H5): *Transformational leadership has a significant negative effect on turnover intention*

The direct effect of transactional leadership style on turnover intention

Several studies observed the connection of leadership styles with turnover intention and organizational commitment (Epitropaki & Martin, 2005). Meyer and Herscovitch (2001) argue that employees tend to be more committed to companies in which affective commitment is present which means that they perceive something in exchange for their performance or efforts. (Meyer & Herscovitch, 2001). Koesmono (2017) observes in his study the impact of transactional leadership on employee turnover intention. In his study, 150 respondents were tested and analyzed where it was concluded that transactional leadership has a direct impact on turnover intention (Koesmono, 2017). The explanation for these results in the effect of transactional leadership and turnover intention are concluded that employees get rewards (Meyer & Allen, 1997) (both tangible and intangible) that are depending on the execution of their working responsibilities, their willingness to have a feeling and sense of obligation to give back the favor to their company by acting more effectively and positively to achieve more desirable outcomes for the organization and at the same time have the intention to stay in the organization. Correspondingly, proportions of leadership styles have been inferring significant positive with the turnover intention and transactional leadership showed to have the highest relationship with turnover intention in the study (Tnay et al., 2013). In his study, Koesmono (2017) developed a hypothesis stating that Transactional Leadership style affects on Turnover Intention. According to his study, such a hypothesis was tested and accepted. The regression coefficient was 1.32. The research proved the findings of previous studies conducted by Hidayat and others (2021), where they have studied the effect of transactional leadership style on the turnover intention during the COVID-19 (Hidayat et al., 2021).

Hypothesis 6 (H6): *Transactional leadership has a significant negative effect on turnover intention*

The direct effect of affective organizational commitment on turnover intention

Salamin (2005) study about turnover intention concluded that workers turnover is a term that used to be contrarily considered to be the episode for institutions because of the costs that go with

it, however, it was concluded in the study that it is presently seen from an alternate perspective (Salamin & Hom, 2005). In Olawale's (2016) study about organizational commitment and turnover intention, it was concluded that a significant negative connection exists between turnover intention and organizational commitment (Olawale, FolusoIlesanmi, & Olarewaju, 2016). Ausar (2016) determined that affective commitment has the most significance that are positive and directly connected to worker's satisfaction and task performance and at the same time, the research indicates that affective commitment is negatively related to turnover intention (Ausar et al., 2016). There was an empirical study on turnover intention in the framework of hospital workers that has focused on the connection between employee turnover intention and organizational commitment. Such research focused on emotional exhaustion, the relationship between anxiety on the job, work-family balance, and employee intention to stay (Lv et al., 2012). Such research studies concluded and supported the negative correlation between turnover intention and affective organizational commitment, also these studies concluded that the most important element in the creation of employee intention to stay is the turnover intention that serves as predictors of staying in the organization (Gyensare et al., 2016; Lv et al., 2012; Meyer & Herscovitch, 2001). Additional research studies in this field concluded that such as the workers build a relationship to their organization and develop effective commitment (Becker & Billings, 1993) that at the same time feel committed to their leaders and therefore decrease the turnover intention inside the organization (Bishop & Scott, 2000).

Hypothesis 7 (H7): *Affective commitment has a significant negative effect on turnover intention*

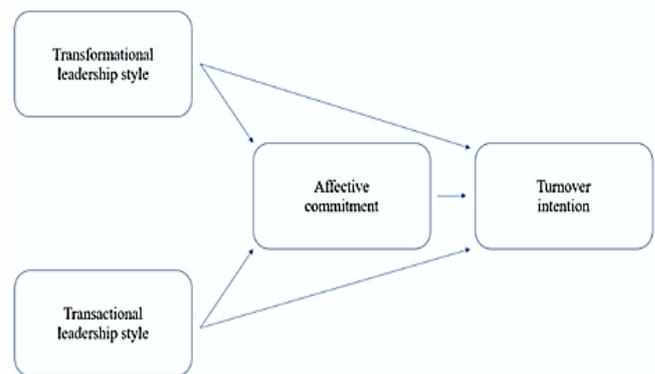


Figure 1. Research Model

METHODOLOGY

Table 1. Sample characteristics

Variable	Demographics	Number
Gender	Male	75
	Female	103
Educational level	Secondary School	7
	Higher Education	69
	Bachelor Degree	50
	Master Degree	31
	Doctorate Degree	21
Age	20-30 years	68
	30-40 years	56
	40-50 years	28
	50-60 years	24
	60+ years	2
Marital Status	Married	86
	Single	67
	Divorce	21
	Widowed	4
Job Title	Graduated nurse-technician	1
	Physiotherapist	1
	Radiology engineer	8
	Laboratory assistant	9
	Secondary doctor	13
	Doctor of Medicine	29
	Specialist doctor	16
	Master of pharmacy	17
	Nurse-technician	51
	Head of the clinic	3
	Head of department	11
Other	19	

Sample and Data Collection

The research was conducted in 2022 in private healthcare institutions in Bosnia and Herzegovina. Institutions that were selected were private hospitals. Online and printed questionnaire were used in order to collect data. Email addresses of private hospitals were collected from their official websites. Each questionnaire included the section where the purpose of the study was explained in order to motivate employees to participate in this research as well as to guarantee the anonymity of participants. All responses collected in this research were valid (Table 1).

Research Design and Instrumentation

The questionnaire was divided into 4 parts. First part contained demographic questions like gender, educational level, age, marital status and job title of employees from private hospitals in Bosnia and Herzegovina.

Second part covered transformational leadership style with 4 dimensions (TF1: idealized influence, TF2: inspirational motivation, TF3: intellectual stimulation and TF4: individualized consideration) measured using 23-item scales, and transactional leadership style with 3 dimensions (TA1: contingent reward, TA2a: active management-by-exception and TA2b: passive management-by-exception) measured with 12-item scales. Item scales for measuring transformational and transactional leadership style (MLQ) were developed by McCall (McCall, 1986). Third part covered turnover intention with one dimension (turnover intention) and it was measured using 3-item scales. For the measurement of 3-item model Michaels and Spector scale was used (Bothma & Roodt, 2013). In the fourth part, 6-item scale developed by Lee (Lee et al., 2001) was used to measure affective organizational commitment. In all scales, the questions were measured with a five-point Likert scale (5 = strongly agree, 1 = strongly disagree) (Table 2).

Table 2. Research variables scales

Transformational Leadership	# of item scale	References
1. TF1_idealised influence	6 item scale	McCall, M. W. (1986)
2. TF2_inspirational motivation	6 item scale	McCall, M. W. (1986)
3. TF3_intellectual stimulation	6 item scale	McCall, M. W. (1986)
4. TF4_individualised consideration	5 item scale	McCall, M. W. (1986)
Transactional Leadership		
1. TA1_contingent reward	4 item scale	McCall, M. W. (1986)
2. TA2a_active management-by- exception	4 item scale	McCall, M. W. (1986)
3. TA2b_passive management-by- exception	4 item scale	McCall, M. W. (1986)
Turnover Intention		
	3 item scale	Michaels and Spector (1982)
Affective Commitment		
	6 item scale	Allen and Meyer (1997)

Data Analysis

SPSS software program was used to examine the data of the study. Cronbach’s alpha coefficient was used to assess the scales’ reliability, and exploratory factor analysis was utilized to examine the original structure of the factor. To examine and summarize the demographic data of the participants, descriptive statistics were employed. Pearson’s correlations were used to demonstrate the connection between leadership styles, affective commitment, and turnover intention. Finally, regression models were utilized to investigate the indirect impact of affective commitment on the link between leadership styles and turnover intention. The next section summarizes the findings.

RESULTS

Initial Analyses

The construct validity of the scales used in this study were examined by exploratory factor analysis.

For the component rotations, the varimax method was used and the principal component analysis was used as the factor extraction method. The final structure of dimensions and items was obtained in the first run. Table 3 represents the Factor loadings as well as the Cronbach's alpha.

Table 3. Factor Loadings and Coefficient Alpha for Affective Commitment, Leadership styles, and Turnover Intention

	Factor loading	Cronbach's Alpha
ITEMS: Affective commitment		.878
AC1: I would be very happy to spend the rest of my career with this organization	.777	
AC2: I really feel as if this organization's problems are my own	.761	
AC3: I don't feel a strong sense of belonging to my organization (R)	.669	
AC4: I don't feel emotionally attached to this organization (R)	.631	
AC5: I don't feel like part of the family at this organization (R)	.621	
AC6: This organization has a great deal of personal meaning to me	.744	
ITEMS: Continuance commitment		.583
CC1: Right now, staying with my organization is a matter of necessity as much as desire	.516	
CC2: It would be very hard for me to leave my organization right now, even if I wanted to	.752	
CC3: Too much of my life would be disrupted if I decided to leave my organization now	.597	
CC4: I feel that I have too few options to consider leaving this organization	.643	
CC5: If I had not already put so much of myself into this organization, I might consider working elsewhere	.410	
CC6: One of the few negative consequences of leaving this organization would be the scarcity of available alternatives	.482	
ITEMS: Normative Commitment		.911
NC1: I do not feel any obligation to remain with my current employer (R)	.706	
NC2: Even if it were to my advantage, I do not feel it would be right to leave my organization now	.686	
NC3: I would feel guilty If I left this organization now	.799	
NC4: This organization deserves my loyalty	.708	
NC5: I would not leave my organization right now because I have a sense of obligation to the people in it	.839	
NC6: I owe a great deal to my organization	.840	

From Table 3 we can conclude that factor loadings for independent and dependent variables in this study are considered significant, +-.50 or higher. The reliability test, according to rules of thumb is as it follows: independent variables: Transformational leadership ($\alpha = .976$) – excellent, transactional leadership ($\alpha = .634$) – questionable; dependent variables: Turnover intention ($\alpha = .886$) – good; mediation: Affective Commitment ($\alpha = .878$) – good.

Test of the Hypothesis

Before testing the hypothesis, in order to determine the correlation and strength among variables of transformational leadership, transactional leadership, affective commitment and turnover intention, the correlation analysis was utilized. Cohen (1988) stated that the effect size for the Pearson's r is: small = $\pm .10 - < \pm .30$; medium = $\pm .30 - <$

$\pm .50$; large = $\geq \pm .50$ (Cohen, 1988). To test the mediation effect, three regression techniques were required. The mediator is regressed on the independent variable in the first process, whereas the dependent variable is regressed on the independent variable in the second operation. The dependent variable is regressed on both the independent variable and the mediator in the third procedure. The mean, standard deviation, and correlations are shown in the table below. According to our model, the independent variables Idealized Influence (II), Inspirational Motivation (IM), Intellectual Stimulation (IS), Individualized Consideration (IC), Contingent Reward (CR), Active management by exception (AME), and Passive management by exception (PME) regress separately on the mediator: Affective Commitment (AC). Following the examination of the correlation between these factors, the following conclusions were reached:

Table 4. Mean, standard deviations, and correlations

Variables	Means	SD	1	2	3	4	5	6	7	8
1 - Turnover Intention	1.530	.928	1							
2 - Affective Commitment	4.188	.870	-.731**	1						
3 - Idealized Influence	4.135	.943	-.548**	.567**	1					
4 - Inspirational Motivation	4.149	.898	-.540**	.566**	.867**	1				
5 - Intellectual Stimulation	4.115	.929	-.435**	.452**	.709**	.732**	1			
6 - Individualised Consideration	4.067	1.001	-.471**	.544**	.823**	.819**	.745**	1		
7 - Contingent Reward	4.003	1.050	-.486**	.500**	.746**	.751**	.761**	.798**	1	
8 - Active management by exception	3.694	.946	-.335	.585	.267**	.232**	.316**	.284**	.334**	1
9 - Passive management by exception	2.135	.995	.326**	.308**	.394**	.307**	.312**	.293**	.334**	.625

Affective commitment is negatively correlated with turnover intention ($r = -.731$) and positively correlated with idealized influence ($r = .567$), inspirational motivation ($r = .566$), intellectual stimulation ($r = .452$), individualized consideration ($r = .544$), contingent reward ($r = .500$), active management by exception ($r = .585$), and passive management by exception

($r = .308$), according to the Pearson product correlation. We can conclude that the effect size for idealized influence, inspirational motivation, individualized consideration, contingent incentive, and active management by exception is large based on these findings. By contrast, the effect size for intellectual stimulation and passive management is medium (Table 4).

Table 5. Summary of hypotheses results

Hypothesis number	Hypothesis	Supported/not supported
H1	AC mediates the relationship between TF and TI	($p < .001$) - Supported
H1a	AC mediates the relationship between II and TI	($p < .001$) - Supported
H1b	AC mediates the relationship between IM and TI	($p < .001$) - Supported
H1c	AC mediates the relationship between IS and TI	($p < .003$) - Supported
H1d	AC mediates the relationship between IC and TI	($p < .001$) - Supported
H2	AC mediates the relationship between TA and TI	($p < .001$) - Supported
H2a	AC mediates the relationship between CR and TI	($p < .001$) - Supported
H2b	AC mediates the relationship between AME and TI	($p < .002$) - Supported
H2c	AC mediates the relationship between PME and TI	($p < .005$) - Supported

The results examined in Table 5 show that all hypotheses (H1, H1a, H1b, H1c, H1d, H2, H2a, H2b, H2c) are statistically significant and therefore supported.

CONCLUSIONS

The interaction of transformational and transactional leadership and turnover intention, as well as affective commitment mediation in the association between transactional and transformational leadership and turnover intention, were investigated in this study. This study’s findings show that transformational and transactional leadership negatively influence turnover intention, and that affective commitment moderates the relationship between transformational and transactional leadership. As a result, we can conclude that managers with transformational and transactional leadership styles have lower turnover intentions due to affective commitment. This study has practical as well as theoretical consequences. Managers can boost organizational commitment and reduce turnover by focusing on

transformational and transactional leadership styles. This study has high practical implications in the hospital’s management board where managers can cut costs of employee turnover for the organization. Low turnover inside the organization means lower costs for the organization and at the same time higher organizational commitment.

Theoretical Implications

The current study adds to leadership theory by implying that transformational and transactional leadership styles, a positive leadership styles, and organizational commitment toward the organization will increase affective commitment by lowering turnover. This study responds to Bass and Avolio (1990) particular demands for more research into the process and conditions of transformational and transactional leadership styles with valuable job outcomes. This study adds to the body of knowledge by examining the mediation in the link between turnover intention and TL.

The results of the mediation in the TL method elucidate the circumstances under which TL is associated to affective organizational commitment, hence this contribution responds to a call for analysis (Yücel, 2021). The findings of this study go beyond past leadership research, revealing a significant linear link between transformative management and the goal of completing CEO turnover. The study found that both transformational and transactional leadership have an indirect impact on staff turnover intention. The findings of this study shows that employee understanding of their direct supervisors' leadership style has a different impact depending on their level of success (Afshari & Gibson, 2016). In addition, the environment in which the research was conducted must be taken into account. Finally, this study looks at the aforementioned linkages in the context of hospital workers during the COVID-19 epidemic, contributing significantly to the theoretical literature.

Practical Implications

This study makes a significant contribution to practical development by advising leaders and organizations on how to create an environment of admiration, interest, participation, respect, and loyalty for employees, which increases their affective commitment and reduces the likelihood of turnover. As a result, firms should embrace transformational and transactional leadership and focus on leadership approaches that will entice people to stay with the company. The study's findings have practical ramifications for businesses, as well as evidence of the positive consequences of providing assistance to employees. Practitioners who wish to dramatically enhance employee attitudes and behavior can do so by treating them properly and providing them with good working environment. The findings of our study have real-world implications for private businesses.

Limitations and Future Directions

There are a couple of limitations in this analysis. The first limitation in this research is that it focused solely on transformative management. Transactional and transactional leadership, on the other hand, can be employed in reports. The second constraint is that the operational definition of turnover intention was the value of four items, rather than organizational papers or contextual efficiency. Employees are thought to have a good knowledge of how they worked and what kind of evaluation they would receive from their bosses. The sample's self-assessed work success will be further validated in future assessments. The use of self-reporting measures is the third constraint because only employees (staff) can provide a sense of leadership style. The fourth restriction is that this study examines both the indirect and direct effects of transformational and transactional leadership on turnover intention through the turnover intention variable.

This could be due to a number of different factors (such as organizational climate, managerial expertise, competency, motivation, and so on) that influence the desire to stay. Future research should also include more analyzing, exploring, and discovering, according to the author. Furthermore, because this study was conducted in hospitals, it cannot be applied to other industries. The study's sample population included Bosnia and Herzegovina healthcare professionals from Sarajevo, Tuzla, and other cities around Bosnia and Herzegovina. Because of the small sample size and lack of variety, the conclusions of this study cannot be applied to other types of workers or other parts of Bosnia and Herzegovina. Missing data is a common issue when utilizing surveys to obtain information. While there are statistical strategies for dealing with missing data that are routinely employed, these techniques may not always yield total accuracy. In addition, one mediating variable was utilized in the analysis, but others could have been employed. In the future, variables such as mediators may be used. Finally, no moderating factors were found. Future research may, for example, look into whether personal qualities modify the relationships between TL and the dependent variables. Various scenarios should be used to investigate the effects on subordinate outcomes, which are influenced by other factors.

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EDUCATIONAL DETERMINANTS OF ONLINE BANKING ADOPTION IN BOSNIA AND HERZEGOVINA

Original scientific paper

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ABSTRACT

This study aims to empirically investigate the determinants of online banking adoption in Bosnia and Herzegovina. The data presented in this paper was collected via a survey from 321 randomly selected banking users in Bosnia and Herzegovina. The survey was developed based on the Technology Acceptance Model (TAM) framework to test the constructs and their ability to predict consumers' behavioral intentions. All gathered data was processed and analyzed using the AMOS software version 24. We performed the Structural Equation Modeling (SEM) for path analysis to estimate the strength of the hypothesized relationships among the determinants. The findings indicate a significant impact of Attitude, Perceived Usefulness, and Perceived Ease of Use on consumers' Intention to Use online banking services. Further, the research has proven that Perceived Usefulness and Perceived Ease of Use impact consumers' Attitudes toward online banking adoption. The path analysis result suggests that Perceived Usefulness strongly mediates the relationship between Perceived Ease of Use and Attitude.

Keywords: *Technology Acceptance Model, Online Banking, Perceived Usefulness, Perceived Ease of Use, Attitude, Intention to Use*

INTRODUCTION

Online banking is a form of banking done over the internet, which enables users to transact (transfer funds, pay bills), access any of the bank services (apply for a loan, deposit checks, or other services), and manage their bank account via your computer or mobile phone. Online banking appeared for the first time in the 1980s, and its usage increased when internet usage started in homes (Cartwright, 2000, as cited by Sanli & Hobikoğlu, 2015). The first online banking application was developed in the U.S.A in 1996 (Gefen & Straub, 2005, as cited by Sanli & Hobikoğlu, 2015). Such activities started in Bosnia and Herzegovina only in the 2000s by eliminating constraints for the implementation of online banking, such as the high cost of infrastructure (costs of computers, internet, software, security issues, and others) (A. Husejnovic & M. Husejnovic, 2021).

Online banking positively reduces the operational costs of banks. It also improves banking service and boosts customer retention (Couto, T. Tiago, & F. Tiago, 2013; Furst et al., 2000). However, despite all the advantages of online banking, the adoption rate in many countries has not risen as strongly as expected (White & Nteli, 2004). Since many studies worldwide examine the determinants of Online banking adoption, it is essential to replicate this study in Bosnia and Herzegovina. As no current studies are analyzing this topic in Bosnia and Herzegovina, the results will contribute to the theory's advancement and development. On the other hand, the practical contributions of this study are expected to help bank management make more informed decisions concerning their product development, sales, and marketing strategies.

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LITERATURE REVIEW

This study is based on the Technology Acceptance Model (TAM). TAM was proposed by Fred Davis in 1986 and designed to describe consumers' adoption of information systems or technologies. According to his framework, the use of a technology is directly driven by the consumers' intention to use it, which is influenced by users' attitudes toward the system and the system's perceived usefulness.

Different studies replicated this model to test the Adoption of online banking in countries around the world. Hence, to replicate the model, it was necessary to research the following determinants and the relationship between them: Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude (A), and Intention to Use (IU).

Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude (ATT), Intention to Use (IU)

In the following paragraphs, definitions of factors and studies that examined the variables from the current study will be mentioned.

Perceived usefulness (PU) is known as one of the independent constructs in the Technology Acceptance Model (TAM). In this framework, Perceived Usefulness (PU) is defined as "the degree to which a person believes that using a particular system would enhance his/her job performance" (Davis, 1989, as cited by Kim & Hyung, 2014). As per the TAM framework, PU is hypothesized to be the direct predictor of behavioral intention to use a technology (Park et al., 2014, as cited by Hamid et al., 2016). Previous studies indicate that PU positively correlates with the intention to use new technologies such as instant messaging acceptance (Wang, Ngai, & Wei, 2012).

Furthermore, according to Davis (1986), **Perceived Ease of Use (PEOU)** is defined as "the degree to which a person believes that using a technology will be free from effort. "Perceived ease of use can be described as an individual's belief that using a particular IT would be free of effort, both physical and mental (Davis, 1986).

Secord and Bakman (1969) defined **Attitude (A)** as: "Certain regularities of an individual's feelings, thoughts, and predispositions to act toward some aspect of his environment." Furthermore, an attitude can be defined as a predisposition to respond favorably or unfavorably to objects, situations, or persons in our environment. When we like or dislike something, we are, in effect, expressing our attitude toward the person or object (Sackett, Burris, & Callahan, 1989).

Davis (1986) states that **Intention to Use** reflects the strength of the prospective user's intention to make or to support the usage decision in their mind (Lee, 2003). Further, behavioral intention refers to the motivational factors that influence a given behavior where the more substantial the intention to perform the behavior, the more likely the behavior will be performed (Lee, 2003).

Perceived Usefulness (PU) and Attitude (ATT)

A study by Chen et al. (2002) concluded that: "The users' perception of usefulness determines attitude towards using a new information system and that attitude is, in turn, a key determinant of actual usage of the new information system." Moreover, perceived usefulness is believed to affect a person's favorable or unfavorable attitudes towards it (Eriksson, Kerem, & Nilsson, 2005).

Studies conducted by Lai and Yang (2009) concluded that employees in a performance-oriented e-business context are generally implemented for good performance and benefits. Comparably, if users realize the usefulness of online banking systems, it would positively impact their attitudes toward their adoption. Many existing studies have validated the effect of perceived usefulness on attitude (Chen, Gillenson, & Sherrell, 2002).

Perceived Usefulness (PU) and Intention to Use (IU)

People will use a particular application if they feel their performance will be enhanced. Otherwise, they will not tend to use it (Davis, 1989, as cited by Daradkeh & Al-Dwairi, 2017). Different studies found that PU affects users' intention to adopt new concepts, such as e-commerce (Pavlou, 2003; Gefen, Karahanna, & Straub, 2003).

Additionally, many previous studies pointed out that PU positively and significantly impacted users' intention to use s-commerce (Hajli, 2013; Gatautis et al., 2014, as cited by Daradkeh & Al-Dwairi, 2017).

Perceived Ease of Use (PEOU) and Attitude (ATT)

Fishbein and Ajzen (1975) state that "attitude towards actual usage is determined by an expectancy of how easy the user thinks he can use the system." Besides, the complexity of one system will become the inhibitor that discourages the adoption of an innovation (Rogers, 1995).

The existing studies suggest that perceived ease of use significantly determines an individual's attitude towards system usage.

Perceived Ease of Use (PEOU) and Perceived Usefulness (PU)

Davis (1986) advocated that there is a significant relationship between perceived ease of use and perceived usefulness. According to Davis, perceived ease of use directly affects perceived usefulness (Davis, 1986, as cited by Schor et al., 2010).

Studies confirm that the two constructs, perceived usefulness and perceived ease of use, are highly correlated but different. Perceived usefulness directly impacts the intention to use, while perceived ease of use is less important in predicting behavioral intentions but rather contributes to the general consumer attitude towards the technology (Davis et al., 1989).

Attitude (ATT) and Intention to Use (IU)

Behavioral intention is likely to be positive by users with positive attitudes and perceived usefulness towards the new technology, all else being equal (Davis et al., 1989). According to many conducted studies, attitudes are highly associated with behavioral intentions (Mengli, 2008).

As per TAM, attitude involves judgment of whether the behavior is good or bad and whether the user is in favor or against performing it. Attitude directly affects the intention to use internet banking (Jones & Leonard, 2014).

RESEARCH MODEL AND HYPOTHESES

Based on the examined literature and the TAM model, the following hypotheses were constructed to measure the determinants and the relationship among them, and their impact on Online Banking adoption:

H1: Customers’ Attitude has a significant impact on the customers’ intention to use Online Banking.

H2a: Perceived Usefulness has a significant impact on customers’ intention to use Online Banking.

H2b: Perceived Usefulness has a significant impact on customers’ Attitudes towards the adoption of Online Banking.

H3: Perceived Ease of Use has a significant impact on customers’ Attitudes toward the adoption of Online Banking.

H4a: Perceived Ease of Use has a significant impact on Perceived Usefulness.

H4b: Perceived Usefulness mediates the relationship between Perceived Ease of Use and Attitudes towards the adoption of Online Banking.

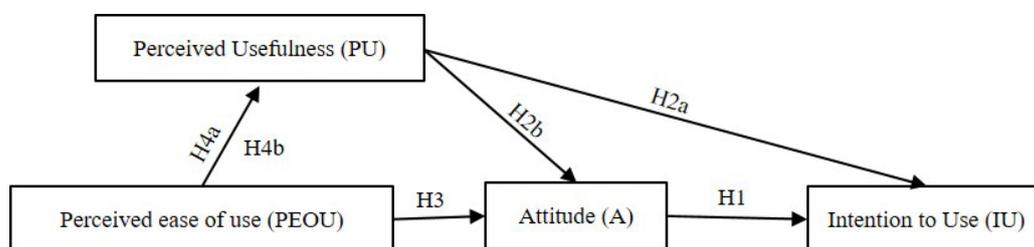


Figure 1: Proposed Research Model

METHODOLOGY

Data Collection

The data for this research was collected from bank users in Bosnia and Herzegovina. We distributed the survey online using Google Forms. The respondents were randomly approached online via social media groups and fan pages of the most famous banks in Bosnia and Herzegovina. Three hundred twenty-one (321) respondents have completed the survey and self-reported their behaviors and intention to use online banking in their daily life.

While constructing a useful measurement instrument for this study, we adopted the measurement tool developed and validated in other similar studies, such as the study by Edwin Cheng et al. (2006).

The survey is divided into two main parts; the first part assesses the demographic profile and business information to ensure data validity. While the second part, divided into five sub-parts, consists of statements that helped determine what contributes to online banking adoption in Bosnia and Herzegovina.

The answers were measured using the Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree).

Population and Sample Size

While we were able to gather three hundred and twenty-one (321) responses for this study, it is essential to remember that the number of bank customers in Bosnia and Herzegovina is substantially larger.

According to the latest reports of the Central Bank of Bosnia, the number of active users reported in 2020 was 2,170,556.00.

Arguably, this can be considered a small sample size, which could decrease the accuracy and reliability of the collected data. However, this sample size is considered adequate to conduct the statistical analysis and as well as adequate to be manageable.

STATISTICAL METHODS APPLIED

For this study Structural Equation Modeling (SEM) was applied based on the recommendation and procedures proposed by Koufteros (1999) as used by Cheng, Lam, and Yeung (2006).

First, an evaluation at the item level using the tests for convergent validity and item reliability was performed. Once a satisfactory model was achieved, we assessed the model fit and unidimensionality.

Next, we evaluated the data for discriminant validity, composite reliability, and variance extracted to gain confidence in the measurement scales. We tested the structural model by employing Confirmatory Factor Analysis (CFA). Subsequently, we used Baron and Kenny’s test to analyze the mediation. Lastly, we conducted Sobel’s (1982) test to further confirm the mediation analysis.

Validity, Reliability, and Model Fit

Particular items of scales were factor analyzed via CFA using AMOS version 24 to analyze the dimensionality of the study scales. CFA determines how well the study sample supports the factor structure of the scales. The model was re-specified to include correlated errors (Byrne, 2010). Following Cheng et al. (2006), only those error terms were correlated whose factor loading items are higher than and above 0.4, as shown in Figure 2.

CFA was performed to analyze the model's suitability (PEOU, PU, ATT, and IU). Which showed the good fit [$\chi^2(556.4)/df(159) = 3.5$, CFI = .95, TLI = .94, RMSEA = .088, RMR = .082] between the measurement and the data collected, only RMSEA and RMR were marginally above the criteria (Fabrigar, MacCallum, Wegener & Strahan, 1999). The results of CFA analysis are summarised in Table 1 below.

Table 1: CFA Model Fit Results

Index	Criteria	Literature	Result
Chi ² / df	< 4	Marsh and Hocevar (1985)	556.4/159 = 3.5
SRMR	< .08	Hu and Bentler (1999)	.082
RMSEA	< .08	MacCallum et al. (1996)	.088
CFI	> .90	Bentler (1990)	.95
TLI	> .90	Bentler and Bonett (1980)	.94

Composite Reliability, Convergent Validity, and Discriminant Validity

Typically, Cronbach Alpha is used to assess the reliability of the measure but owing to the underestimation problem with Cronbach's Alpha there is a need for a more significant estimation of true reliability (Garson, 2012). Such estimation is done through construct/composite reliability (CR).

As shown in Table 2, our model adequately met the acceptable values for both Cronbach's Alpha and CR, i.e., > 0.7 for confirmatory purposes (Sarstedt, Ringle, & Hair, 2017). In addition, the factor loadings of our scales were also above the criteria value of 0.7 (Sarstedt et al., 2017). See Figure 2 for details.

Table 2: Construct Validation

	Cronbach's α	CR	AVE	Discriminant Validity (DV) - HTMT			
				PU	PEOU	ATT	IU
PU	.940	.941	.801	-			
PEOU	.930	.931	.771	.790	-		
ATT	.943	.943	.806	.846	.811	-	
IU	.927	.924	.754	.868	.894	.887	-

DESCRIPTIVE STATISTICS

Out of the three hundred twenty-one (321) respondents that submitted the survey, 77.9% were female; 22.1% were male.

Most respondents (35.5%) were in the 31-45 age group, 32.7% were 19-30 years old, 23.4% were 46-60, 7.2% were younger than 18, and only 1.2% were older than 60 years.

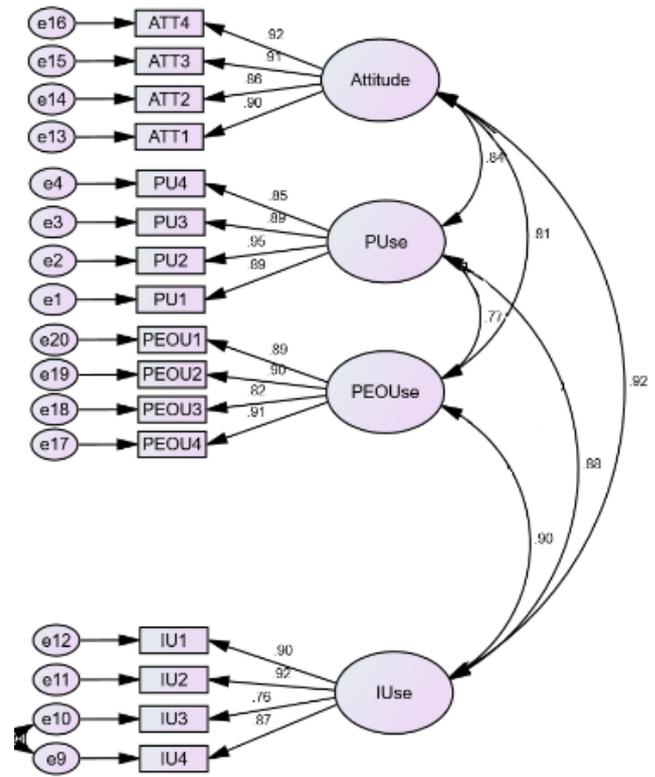


Figure 2: CFA Graphical Model

For convergent validity, the AVE (average variance explained) should be greater than 0.5 (Höck & Ringle, 2006). The AVE values in Table 2 are well within limits to prove the convergent validity of the constructs.

Furthermore, discriminant validity (DV) was tested. DV is defined as the degree to which a particular latent construct is dissimilar from other latent variables (Duarte & Raposo, 2010). We used the Heterotrait-Monotrait Ratio (HTMT) of the correlations. Discriminant validity is violated when the HTMT is > 0.90 (Sarstedt et al., 2017). Table 2 indicates that all the HTMT values were less than 0.90.

Most respondents were highly educated, with 35.8% Bachelor's Degree holders and 13.7% Postgraduates. 39.3% of respondents reported having never used online banking services before, while 38.6% reported using it 1-5 times per month. From the data, we can conclude that educational level positively impacts online banking adoption. Other demographic details can be found in Table 3 below.

Table 3: Demographics of the respondents

Gender	Frequency	Percent
Male	71	22.10
Female	250	77.90
Total	321	100.00
Education level		
Vocational Degree	26	8.10
High-School Degree	101	31.50
Bachelor’s degree	115	35.80
Postgraduate Degree	44	13.70
Other	35	10.90
Respondent industry		
Academics	68	21.20
Finance	28	8.70
IT related	13	4.00
Retail	34	10.60
Manufacturing	27	8.40
Tourism	8	2.50
Other	143	44.50
Length of using Online Banking services		
1 year	67	20.90
2 years	35	10.90
3 years	31	9.70
I am not using Online Banking services.	119	37.10
More than 3 years	69	21.50
Frequency of using Online Banking services		
1 - 5 times per month	124	38.60
5 - 10 times per month	32	10.00
11 and more times per month	39	12.10
Never	126	39.3

STRUCTURAL EQUATION MODELING (SEM)

Primarily, the fit of individual parameters in the hypothesized model was tested to determine the viability of their estimated values. The results supported that parameter estimates exhibit the correct sign and size. The results indicate that the estimates were normal and acceptable, as shown in Figure 3. Before testing the study hypotheses, the fitness of the SEM model was checked. It showed satisfactory results on the four-factor path model [$X^2(639)/df(162) = 3.95$, CFI = .94, TLI = .93, RMSEA = .096, RMR = .106],

similar to the measurement, CFA model, RMSEA and RMR in our structural model were also marginally above the criteria (Fabrigar et al., 1999), see Table 1, for reference values on these fitness indices.

We utilized bias-corrected bootstrapping with 95% confidence intervals (i.e., lower-level confidence interval or LLCI, and upper-level confidence interval or ULCI) and standardized path estimates to test our hypotheses. The hypotheses’ results related to the model’s direct effects are presented in Table 4. The results suggest that all five hypotheses related to the direct effects were supported.

Table 4: Hypotheses Testing Results – Direct Effects

Path in the Model	Estimate	LLCI	ULCI	Direct Effect (P-value)	Status
ATT → IU	.466	.269	.680	.000	H1: Supported
PU → IU	.320	.149	.524	.001	H2a: Supported
PU → ATT	.492	.298	.681	.002	H2b: Supported
PEOU → ATT	.331	.121	.511	.008	H3: Supported
PEOU → PU	.793	.714	.852	.001	H4a: Supported

Note 1: *Significant at 95% confidence interval

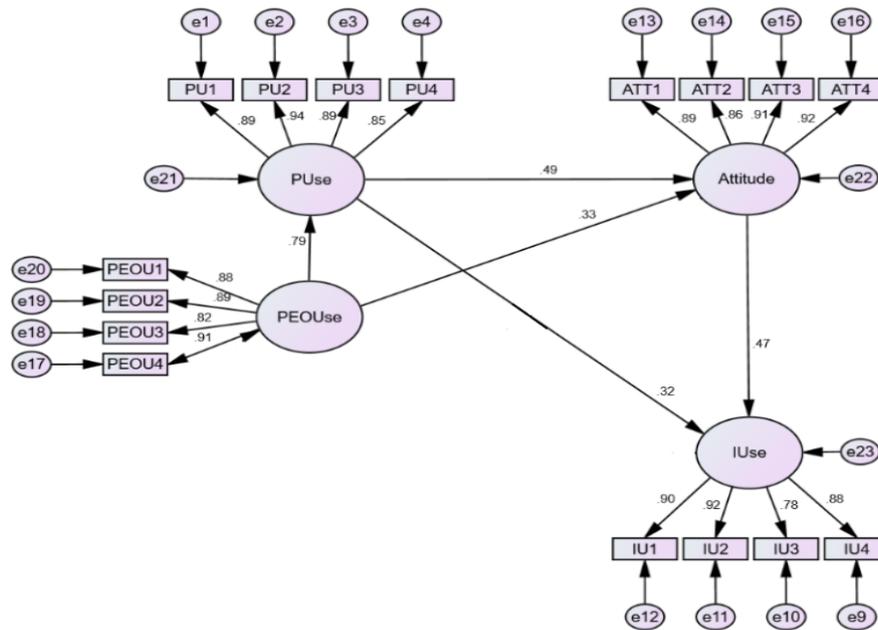


Figure 3: SEM Path Diagram

MEDIATION ANALYSIS – INDIRECT EFFECTS

Results for hypothesis H4b on the mediation role of PU between PEOU and ATT can be viewed in Table 5. The critical ratio value (CRV) of the total effect was 6.95 (>1.96), indicating that mediating effect was significant. Likewise, the CR value of the indirect effect, i.e., 3.00 (>1.96), was also significant.

CR value of direct effect was 3.69 (>1.96), whereas values at lower and upper bounds of bias-corrected bootstrapping CIs contained no zero; their two-tailed p-values were also <.05, so we concluded it as a partial mediation as per the guidelines of Baron & Kenny (1986).

To further confirm the mediation analysis, we conducted Sobel’s (1982) test. The test confirmed the significant indirect effect of PEOU on ATT via PU ($z = 7.47, p < .001$); hence H4b was further supported.

Table 5: Mediation Analysis

PEOU-PU-ATT	Estimate	SE	CRV	Bias-Corrected 95% CIs		
				LLCI	ULCI	p
Total Effect	.667	.096	6.95	.538	.797	.001
Direct Effect	.306	.083	3.69	.114	.480	.007
Indirect Effect	.198	.066	3.00	.214	.536	.001

DISCUSSION

Based on previous studies and the literature reviewed, it was anticipated that all hypotheses from the proposed model would be supported. The focus of the study was to investigate what determinants impact online banking adoption in Bosnia and Herzegovina.

The study results supported all the hypotheses with statistically significant results. The proposed H1 hypothesis: Customers’ Attitude has a significant impact on the customers’ intention to use online banking, was supported. This result suggests that consumers’ attitude toward online banking significantly impact their intention to use it. The result is in line with the study of Davis et al. (1986), which concluded that: “Behavioral intention is likely to be positive by users with positive attitudes towards a new technology, all else being equal.” As well as the study by Mengli (2008) also confirms that “attitudes are highly associated with behavioral intentions.”

Further, H2a: Perceived Usefulness has a significant impact on customers’ intention to use online banking, was also supported. This result is consistent with the studies conducted by Pavlou (2003) and Gefen et al. (2003), which found that PU affects users’ intention to adopt new technological concepts. Additionally, other prior studies supported that PU positively and significantly impacted users’ intentions (Hajli, 2013; Gatautis et al., 2014 as cited by Daradkeh & Al-Dwairi, 2017).

The H2b hypothesis was supported as well: Perceived Usefulness has a significant impact on customers’ Attitudes towards the adoption of online banking. This outcome is coherent with the study by Cheng et al. (2006) that “The users’ perception of usefulness determines attitude towards using a new information system.” Moreover, a study by Eriksson et al. (2005) found that: “It is believed that perceived usefulness affects a person’s favorable or unfavorable attitudes towards a phenomenon.”

Additionally, H3: Perceived Ease of Use has a significant impact on customers' Attitudes towards adoption of online banking, was supported. This result stipulates that consumers' attitudes are also shaped by the perceived ease of use of online banking services. This conclusion is coherent with the conclusions of Fishbein and Ajzen (1975), which state, "Attitude towards actual usage is determined by an expectancy of how easy the user thinks he can use the system." Besides, a study by Rogers (1995) found that: "The complexity of one system will become the inhibitor that discourages the adoption of any innovation." The study results also supported hypothesis H4a: Perceived Ease of Use has a significant impact on Perceived Usefulness. Indicating that there is a strong impact of perceived ease of use towards perceived usefulness, which is consistent with the study of Davis (1986). The study concluded that there is a direct effect of perceived ease of use on perceived usefulness (Davis, 1986). Lastly, H4b: Perceived Usefulness mediates the relationship between Perceived Ease of Use and Attitudes towards adoption of Online Banking, was supported. This result shows that perceived usefulness and perceived ease of use play an important role in shaping consumers' attitudes towards Online Banking and their intention to adopt it. These results are aligned with the studies by Elkaseh, Wong, and Fung, (2016), which concluded that: "Attitude is predicted by the determinants - perceived usefulness and perceived ease of use." The study by Davis (1986) and other studies based on it confirm that the two constructs, perceived usefulness and perceived ease of use, are highly correlated. Moreover, perceived ease of use contributes to the general consumer attitude towards the technology (Davis et al., 1989).

CONCLUSION

The focus of this study was to explore the relationship between perceived usefulness, perceived ease of use, attitude, and intention to use Online Banking in Bosnia and Herzegovina. As per the literature reviewed, the hypotheses model with six hypotheses was proposed and tested using Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) via AMOS. A random sample for this study was taken from existing bank users from Bosnia and Herzegovina.

The questionnaire was distributed to bank customers online using Google Forms. A total of three hundred and twenty-one (321) respondents completed the survey, providing answers to forty-two (42) questions for this study. The sample was well distributed in terms of professional and educational background and other characteristics. The study results were primarily obtained from respondents from a specific region in Bosnia and Herzegovina due to the proximity of the respondents that were willing to take part in the study. It is recommended that a similar study with a larger sample could be conducted in the future.

To ensure validity and reliability of the data, Cronbach alpha and factor loading items were tested before hypotheses testing. Further, confirmatory factor analysis (CFA), composite reliability, convergent, and discriminant validity analysis were conducted to verify the data and proposed model. Lastly, structural modeling equation tests were conducted to test the proposed hypotheses using AMOS version 24. The results indicated that the research model was valid and supported all six hypotheses.

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