

Univerzitetska misao - časopis za nauku, kulturu i umjetnost [ISSN: 1451-3870]

Vol. 17, str. 33-45, 2018 god., web lokacija gde se nalazi rad: <http://um.uninp.edu.rs>

Tematska oblast u koju se svrstava rad: Društvene i humanističke nauke / podoblast: Pedagogija

Datum prijema rada: 15.05.2018.

Datum prihvatanja rada: 01.12.2018.

UDK: 371.3:811.163.41/42[004(497.6)

doi:10.5937/univmis1817033M

Originalan naučni rad

Korištenje IKT u nastavi B/H/S jezika i književnosti u osnovnim školama Kantona Sarajevo: između mogućnosti i očekivanja

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Apstrakt

Tehnološki razvoj nametnuo je nove i dalekosežne promjene u modernom društvu. Tako se mnogi školski sistemi nastoje transformisati praveći otklon prema tradicionalnom i okretanju novim i 'modernim' pristupima u skladu sa potrebama vremena u kojem živimo. U Sarajevskom Kantonu postoji očita tendencija povećanja korištenja IKT u procesu nastave koja najviše ovisi o nastavniku. Upravo inkorporiranjem IKT u nastavni proces stvaraju se pretpostavke za unapređenje cjelokupnog obrazovnog sistema.

Provedena istraživanja usmjerena su na ispitivanje nivoa upotrebe IKT u nastavi B/H/S jezika i književnosti (N = 24), u osnovnim školama Kantona Sarajevo. Uvidjeli smo koja multimedijaska sredstva najčešće koriste ispitanici. Ovo istraživanje provedeno je u junu 2017. god. i otkrilo je da postoji evidentna razlika u opremljenosti škola, kao i to da nastavnici daju primat određenim medijima naspram drugih.

Nastavnici s višegodišnjim iskustvom u poučavanju koriste tradicionalne metode i smatraju ih nezamjenjivim. Tako smo zaključili da korištenje multimedijalnih sredstava ovisi o njihovoj spremnosti ili nespremnosti da prihvate i implementiraju nove tehnologije.

Ključne riječi: IKT, multimedija, obrazovanje, učenje, didaktika, B/H/S jezik

THE USE OF ICT IN TEACHING B/C/S LANGUAGES AND LITERATURE IN PRIMARY SCHOOLS OF SARAJEVO CANTON: BETWEEN THE POSSIBILITIES AND EXPECTATIONS

Abstract

Technological developments have imposed far-reaching changes in the modern society. Thus many school systems seek its transformation in turning away from the traditional to new and 'modern' approaches in education in accordance with the needs of the time we live in. In Sarajevo Canton, there is an obvious tendency to increase the use of ICT in the teaching processes, which depends mostly on the teachers. By incorporating the ICT into the teaching processes, the preconditions for improving the overall education system are created.

The conducted research is aimed at examining the levels of use of ICT in teaching B / C / S Languages and Literature (N = 24), in primary schools of the Sarajevo Canton. We looked at which multimedia resources are most frequently used by respondents. The research was conducted in June 2017 and it showed that there is a clear difference in school equipment, as well as the practice that certain teachers give priority to certain media versus others.

Teachers with many years of teaching experience prefer to use the traditional methods and consider them irreplaceable. Thus we concluded that the usage of multimedia resources depends very much on teachers' readiness or unwillingness to accept and implement the new technologies.

Keywords: ICT, Multimedia, Education, Learning, Didactics, B / C / S Languages,

INTRODUCTION

The recent developments in computer technology have caused changes in the very concept of education, teaching contents, teaching technology and the relationship between teachers and students. The computer has become an integral part of the education system in modern schools and represents a significant component of education. Applying computers in the educational process can largely overcome the weaknesses of traditional teaching. With Computer-based teaching we can make teachers manage and teach more effectively. The traditional teaching model is no longer able to meet the accumulated needs of modern society. Computerization of teaching is one of the possible solutions for better and more efficient education. Therefore, the computerization of teaching deserves to be studied more, especially when it is known that numerous (national and global) studies suggest that the computerization process is indispensable in modern education and learning.

Technical and technological progress has brought about significant changes in many areas of life, including education. For example, media has become part of everyday life and plays a significant role in education. Not so long ago, the living word was the main source of information that was transmitted orally from man to man. Nowadays teachers and students have an inexhaustible amount of resources at their disposal for transmitting and receiving information. But, we mustn't forge the educational environment is not adequately regulated for the benefit of our students and teachers. Despite its modernity (attraction), media can still make the teaching old-fashioned or teacher-centered. Sometimes teachers forget that the media is (only) the teaching tool. In order to use the modern ICT in the classroom, teachers must have sufficient computer skills. Educational technology in the 21st century consists of media that modernize teaching - personal computers, internet, smart boards, and smart phones. However, in that same century, there are schools where students do not have textbooks, do not use CD players, do not watch movies, and do not use PowerPoint presentations in lessons. Computers are the media that have certain advantages to all other media. Namely, expert pedagogic and didactic analysis show that computers create optimal conditions for the teaching process. When we compare it to some other media, such as film, TV, audio, etc., we immediately notice the significant difference that is reflected through the susceptibility of computer program equipment to adapt faster to changes and novelties, primarily in terms of updating and spreading the area of use. This is a significant feature of computer programs of all kinds and a significant insight for those who oppose the introduction of computers in education.

We share the opinion with those who argue that the computer is the most important teaching tool in the process of education, but not the only one. We will not overdo it if we emphasize the inclusion of computers in education so that the student,

in cooperation with the teacher and with the use of other teaching materials, acquires new knowledge, skills, and habits. The computer serves him a dynamic tool that can enter with different issues, demands, and changes.

COMPUTER AS A MEDIA IN TEACHING B / C / S LANGUAGES AND LITERATURE

The present-day teachers have the luxury of using computers in classrooms. In addition to being fortunate enough to live with new educational technologies, teachers at elementary schools in particular are faced with many difficult challenges. The first one is a technical component of understanding modern education technology that requires constant and continuous education and training as computers and other ICT gadgets develop very rapidly. The next challenge is related to the efficiency of the teaching process created by ICT between the students and teachers. Furthermore, there are issues related to didactics that come from teachers who accept and use a new medium in teaching. For instance, teachers show the lack of confidence in acquiring knowledge, concepts, thinking and development of critical thinking of students, as well as that these media motivate and activate students for their attractiveness (Rončević, 2011).

Under the conditions of contemporary science, the advancement of technology, we can no longer prevent the technology from entering the teaching and learning processes. Namely, if we want teaching and learning to become more efficient, to achieve rationalization, and to overcome the crisis in education, it is necessary to use the achievements of science and technology as much as possible (Unkić and Bošnjak, 2017). Talking about using computers in teaching, it is necessary to make difference between the computer education and the education with computers. Computer education, the former, encompasses the mastery of information technologies (at different levels) related to the use of computers as a tool in education and life activities and the knowledge of hardware and software. Teaching and learning processes by using a computer are realized through various teaching strategies that involve the interactive application of computers in the teaching process and learning where the rules of managing the interaction between students and computers are applied, taking into account the pedagogical, psychological and didactic - methodological requirements. Three areas of computer use are known (Gerlič, 2000: 13):

- **COMPUTER EDUCATION** - activities that we want to introduce to the participants of the educational process with the operation and use of computers or to direct them to that as a professional area
- **USING COMPUTERS IN EDUCATIONAL PROCESSES** - activities related to the immediate educational process of any subject area where it is viewed as a means or aid represented in some or all stages of the teaching process
- **USE OF COMPUTERS IN ACTIVITIES WHICH FOLLOW EDUCATION** - activities of research and management of the education system, which supports ICT in education

Teaching Technique and Technology uses the computer in all strategies of the educational process. Such strategies are implemented by using a computer; we present

an educational content to the student, after that the student answers, and the computer evaluates the response and based on the evaluation results, the program determines the next stage of the work. Through computers, we communicate with the student orally and in written form, which is very important for the teaching of mother tongue and it gives students the necessary information on the level of the mastered teaching material at each stage. It instructs the student to solve problems, gives him the additional explanations of what and how he should do, so he can move on to the next level. Through the communication with the program, the student is in a position to assess the consequences of the actions taken, and he can change the parameters to reach the solution. The student is not only in the situation to observe, but also to perform certain mental operations. Such teaching contributes to the more objective evaluation of its learning process, which reduces the teacher's subjectivity. Also, mistakes such as halo effects, mismatches, generosity, etc. are to be avoided.

The education and training by using computer refers to a wide range of features such as displaying content by applying adequate educational software during or after the implementation, individual and differentiated learning, individualized knowledge testing and help learning by computers (in the absence of teachers) (Mandić, 2014). Applying computers in teaching and learning process significantly changes the organization of the educational process and the position of students and teachers in this process. The student and the teacher gain the new roles and positions. According Mandich this form of education, where the computer has the role of a teacher, enables each student to have an active role in the learning process, because he is no longer a passive observer, but an active participant in the teaching process. The student has the conditions to move faster, motivation for studying and learning increases, he becomes more independent, and he becomes more creative and has more responsible approach to work. By applying computer in the teaching process, the student becomes not only the main subject of teaching but also an active teacher's assistant. The teacher becomes the organizer and controller of the information flow, the manager of the entire process. Therefore, the teachers should accept the computer as a necessary didactic medium that could improve teaching and learning process in all subjects. The computer helps the teacher to raise the teaching to a higher level, to deal more with analysis and not by a simple reproducing of the material, to make his role better and more efficient. Computer teaching offers far more time for the creative work, for educational and professional activities (cooperation with students, counselling, encouragement and systematic monitoring of each student's work). However, the computer as a didactic medium does not replace the teacher, but successfully complements his role, helping him to lead the teaching process successfully. The teacher and the computer can have the same functions to a considerable extent but cannot have the same structure of the work. Only the teacher can do complex operations in the learning process, such as learning based on will, motivation, and emotional processes, while these cannot be realized by using a computer. Recent researches show the significant differences in the quantity and quality of the knowledge of students who used computers in learning compared to those who did not. This kind of teaching has activated the mental abilities of the students, stimulated creative thinking, and helped to develop a creative potential of the personality, as well as independence in learning and building openness to problems (Matijević, 2014).

In addition to numerous advantages, using computers in teaching and learning processes has its weaknesses and limitations. Opponents of excessive use of computers in teaching and learning argue that computers dehumanise teaching and learning process thus endangering a personal development of each student. Moreover, computers tend to disable students to think independently. Furthermore, as a mere machine computer cannot provide student with warmth, understanding and friendship, whereas the teacher on the other side can and does so. It should also be noted here that computers limit the amount and quality of communication and interaction between students and teachers. This obviously weakens students' social skills and prevents them from expressing their emotions and feelings in the class and elsewhere. In addition, using computers cannot accommodate the content complexity of the learning process because the efficiency of teaching methods and teaching resources is realized through their creative combination and proper use.

By serious and detailed analysis of the possibilities of using computers, their use in the process of teaching and learning, it should be noted that this is not something that is temporarily or trendy but that it is a media that caused such changes that no media has so far achieved regarding the effectiveness of learning, the position and role of teachers and students in the learning process itself. Having in mind the trend of development of computer technology, an increasing number of authors believe that in the near future computers will become the main source and the only media in learning processes. Beside the fact that computers do provide greater efficiency in teaching and learning processes, it does not mean that teachers should ignore and abandon all other kinds of teaching media.

The media is a part of the contemporary present and provide new opportunities in the educational process. The efficiency of using media in teaching, or better mastering content, does not depend only on the media itself, but also on its interrelationship with several other factors - the goals of learning and teaching, the educational content and the quality of their didactic formatting, teaching situation, preknowledge, motivation, students' interests and attitudes, and didactic-methodological skills and instructive assistance of teachers, etc. The use of computers in teaching the B / C / S languages and literature offers immeasurable opportunities to organize and improve the teaching practices of this particular subject. It is believed that many weaknesses and shortcomings of the traditional teaching practices of the B / C / S languages and literature would be reduced. For example, by using computers for teaching the B / C / S languages and literature preconditions are created to design specific flexible models of work, selection of appropriate methods, forms and work strategies, which will enable the development of cognitive and creative abilities of students. Furthermore, computers would help suppress the verbalism in teaching and make it more obvious and interesting. It is assumed that computer technology learning is best to begin when linguistic communication competences are accompanied by literary text illustrations or the acquiring of voice analysis concepts. Although the fundamentality of modern technology is far beyond the possibilities of its use in the mother tongue teaching process, it is not inconsiderable to mention that in the process of connecting science and technology, we do not have to overestimate the role of a computer, to perceive it as a wizard. It is only a medium, multifunctional tool that provides the conditions for learning and creativity, leaving it as much space as it

objectively deserves. The primary goal of this kind of application in mother tongue is not to acquire the basic IT knowledge and skills of handling the machine, but to enable:

- improving the quality of knowledge and language creation of students
- Improving teaching methodology
- Individualization and differentiation of B / C / S Languages and Literature teaching
- providing conditions for adapting children to the modern knowledge society
- developing teaching strategies, methods, and principles of work using computers
- improving the professional competence of teachers in the use of modern computer technology
- extending the influence of ICT on students, teachers and the effects of the teaching process.

In the language teaching process, computers can be applied in different ways:

- as medium that transmits an auditory, visual or audio-visual message to stimulate or develop speech, speech analysis, or stimulation of artistic expression,
- as creative and research tool for your own creativity, and
- as educational content base.

With the help of computers, we can create a text, sound, image, animation and simulate various processes. Moreover, we can present various contents via multimedia, make them more convincing, more interesting, and increase the motivation of the students. It is possible to learn actively and program tasks of different levels appropriate to individual students' abilities. Greater efficiency can be achieved by using interactive courses stored on CDs with the contents of language exercises, oral and written expressions, and the contents that are used to solve different language problems. From the beginning of elementary education, students can listen to contents, connect contents by the image – sound criterion, do the voice analysis, formulate thoughts, and develop all forms of expressions. It would allow students to see a large number of literary works, illustrations, written information articles, to make a distinction between visually and auditory, connect written information, build aesthetic criteria and acquire knowledge in the field of B / C / S Languages and Literature. Throughout the lesson, it is possible to use computer successfully and solve a number of issues such as: content visibility, accessibility, learning effects control, differentiated access to each student, adoption of content without the help of teachers, and creation of their own content.

It is also possible to design and realize the material through which the students will practice oral expression exercises, such as description of characters, appearances, landscapes, subjects, events, etc. The grammar and spelling contents which suggest a certain rule can be introduced in a very interesting way, since these contents can often know to be tough to understand and comprehend. Students do not need to know the computer language to make an illustration of a content, move statements in a series, or on a page that is presented, nor create a simulation of a situation (when we want to explain some moral of the story through the characters' actions).

The application of computer tools is not just a simple simulation, imitation of traditional media; they are far more than that. With faster work and easier

manipulation of these tools, students will devote more time to experimenting, researching and finding original solutions and distinct expressions, which is certainly specific to computers only. We can conclude that computer is a medium that has no alternative when it comes to experimentation and research in the field of oral and written expressions.

Using language tools, students are able to search independently the inexhaustible databases even through oral communication. They can also handle different tasks through which they need to fill, add, form a series, and make a poem illustration or other literary text. Computer tools should be chosen according to the problem set out by the teacher and the psychophysical capabilities of the students. However, the computer tools do not replace traditional media and they should be treated as additional media that provide much greater creative possibilities. Teachers who teach the mother tongue should help students to become competent in applying computer tools to the adoption of the characters of both scripts, speech and creativity development, and the ability to express themselves through these media.

OBJECTIVES AND TASKS OF RESEARCH

The aim of the research is the representation and use of multimedia resources in B / C / S Language and Literature teaching in the primary schools of the Sarajevo Canton. Also, through the survey, it was found out how often teachers use multimedia, which media resources are more represented in the classes, depending on factors, dependent and independent variables, and whether they are used more in lower or higher classes.

Using multimedia resources in teaching facilitates communication in the teaching process itself and it facilitates the learning process. By using these resources, the student is stimulated by independent and constructive learning, thus enhancing his activity and motivation. With this approach, teachers motivate students to work and put them in the centre of attention to enhance their activity and in this way they impact on ultimate success.

Acquiring new competencies is very important. Their development is conditioned by the ability to find, detect and choose information. In contemporary times, this means that we explore, find and discover information by means of the media, then distinguish them, mark them, and in the end, the useful ones turn into permanent knowledge. Human values are taught in and outside the school, and the school is in every place around us; school of language, foreign and mother tongue, sports school, computer school, school of entrepreneurship etc. We should ourselves what affects the development of mentioned human values, schools, families, informal education?

Adults increasingly acquire competences through informal learning. Life style and way of life greatly contributes to the fact that every new life situation implies learning and acquiring certain forms of behaviour, gaining experience, for which upbringing and learning are always connected and mutually complemented.

According to the defined subject and the problem of research and the goal we set up, the research is based on several tasks aimed at examining the statistically significant correlation between the above-mentioned factors:

- to explore, identify and analyze the reasons for the use/ non-use of multimedia resources in the teaching process

- to explore, identify and analyze the attitudes and opinions of B / C / S Language and Literature teachers on the use of multimedia resources in the teaching process

- to explore, identify and analyze the use of multimedia resources in B / C / S Language and Literature teaching in relation to the age and length of service in the teaching process.

METHODS OF RESEARCH

This research has used:

- The analysis of the contents of the literature documents implies the processing of the collected data of earlier research on the given problem, methodology, research results, i.e. implies the synthesis of all the knowledge about the problem that is subject to research in a systematic way. This method enables the enrichment of the fund of scientific knowledge based on the study of all available literature on this topic.

- The teachers of the subject and classroom teaching of the Sarajevo Canton primary schools, different age, gender and length of service participated in the research, and as a survey technique, a survey and a questionnaire were used as an instrument and data carrier.

- Surveys as a way of collecting data from respondents, in this case teachers and students, enabled respondents to respond to the same questions, and based on the given attitudes, opinions and answers, as well as the facts and the collected data after the survey was completed, the obtained data and the information needed to study the problem of the research, determine the connection between some phenomena, and on this basis provide an adequate solution to the problem or guidance in solving it. For the purpose of this research, a survey questionnaire was created which consists of several types of questions, dependent and independent variables. Teachers responded to the questions by providing the offered answer in the following form:

- a) excellent b) very good c) good d) poor

- a) often b) sometimes c) very rarely d) never

- a) yes b) no or a) a lot b) little

After the data collection was carried out, the statistical analysis of the data obtained by the survey was carried out, with the aim of concretizing the knowledge, observing their interrelationships and the conditions of the research subjects based on the hypothesis. The results of this research are presented in the appropriate number of tables and graphs, in order to provide better visibility and comparison of the data.

The participants of the subject of this research are teachers of B / C / S Language and Literature from the classroom and subject teaching. A sample of the survey: N = 24. The sample is represented by the primary school teachers in the Sarajevo Canton (N = 24), urban areas, different sex and years of service.

14	58,3	7	29,2	3	12,5	0	0
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More than half of the respondents, 14 of them, stated that they "often" realize teaching process using the multimedia tools. Some of the respondents use multimedia resources "sometimes", while 3 teachers use them very rarely. In this sample, there are no teachers who never use multimedia resources in the teaching process. Based on the obtained results we can conclude that the use of multimedia resources in the process is very present.

Table 4 Values χ^2 on the frequency of the use of multimedia in teaching process

F0	Ft	F0-Ft	(F0-Ft)²	$\frac{\Sigma(F0-Ft)^2}{Ft}$
Σ 24				$\Sigma 18,332$

By analyzing the results of teachers' evaluation we have come to the conclusion that the calculated value $\chi^2 = 18,332$ at the significance level of 0.01 is greater than the limit value of 11.34, as well as at the level of significance 0.05 of the limit value 7.82 for $df = 3$, we have found that there are significant deviations from the empirical of the expected frequencies, respectively, there are statistically significant differences in estimation.

CONCLUSION

Numerous researches are in favour of increasing the efficiency and quality of teaching the mother tongue by using computers, which is unfortunately still at the very beginning. If we add to this the negative attitudes of the teacher to the computer, looking at it as one type of trend that does not meet the B / C / S Language and Literature requirements, it is clear that the future of this kind of teaching is not close. In appreciating the criticism that suggests the specifics of the speech, first of all, the oral speech learned in live communication, and turning into a cliché of the content to be elaborated, it is indisputable to call attention and view all the facts from different angles. One of the key obstacles to the application of modern computer technology is insufficient IT literacy and professional competence of the teaching staff as well as inadequate experience in the field of this organization of teaching.

Taking into account the rapid development of information technology and educational software, it impels the demotivation of the teacher to monitor constantly the achievements in this area and apply the same. In order to overcome this, we need the current staff to learn computer literacy and find ways to make these technologies become an integral part of teaching curricula in the mother tongue teaching. The use of coercion, in this sense the using the media, would only have negative effects. Therefore, a plan and systematic advocacy of these media are expected, in which the actors of the teaching process will independently discard their traditional models of

work. The primary goal of using computers as a didactic medium is not to criticize the existing state of the mother tongue teaching, or promoting computers as a magical media, which can solve all the problems of teaching, learning and language creativity by the exclusion of traditional media and certain activities of teachers in the educational process. The strength and efficiency of computer application in the teaching process should be reflected in the creative combination of new and traditional media.

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REZIME

Brojna istraživanja podržavaju povećanje efikasnosti i kvaliteta podučavanja maternjeg jezika upotrebom računara, što je nažalost još na samom početku. Ako tome dodamo negativne stavove nastavnika prema kompjuteru, gledajući na to kao na jednu vrstu trenda koji ne zadovoljava zahtjeve za B / C / S jezik i književnost, jasno je da je budućnost ove vrste nastave nije blizu. Uvažavajući kritiku koja sugerise specifičnosti govora, prije svega, usmeni govor naučen u živoj komunikaciji, i pretvarajući se u kliše sadržaja koji treba razraditi, neosporno je skrenuti pažnju i pogledati sve činjenice iz različitih uglova . Jedna od ključnih prepreka za primjenu savremene računarske tehnologije je nedovoljna informatička pismenost i profesionalna kompetentnost nastavnog osoblja, kao i neadekvatno iskustvo u oblasti ove organizacije nastave.

Uzimajući u obzir brz razvoj informacionih tehnologija i obrazovnog softvera, ona podstiče demotivaciju nastavnika da stalno prati dostignuća u ovoj oblasti i primjenjuje se isto. Da bi se ovo prevazišlo, potrebno je da sadašnji kadar nauči kompjutersku pismenost i pronade načine da te tehnologije postanu sastavni dio nastavnih planova i programa u nastavi maternjeg jezika. Upotreba prisile, u tom smislu upotreba medija, imala bi samo negativne efekte. Stoga se očekuje plan i

sistematsko zagovaranje ovih medija, u kojem će akteri nastavnog procesa samostalno odbaciti svoje tradicionalne modele rada. Primarni cilj upotrebe kompjutera kao didaktičkog medija nije kritikovanje postojećeg stanja nastave maternjeg jezika, niti promovisanje kompjutera kao magičnog medija, koji može rešiti sve probleme nastave, učenja i jezičkog stvaralaštva isključivanjem tradicionalnih medija i određene aktivnosti nastavnika u obrazovnom procesu. Snaga i efikasnost primene računara u nastavnom procesu treba da se ogleda u kreativnoj kombinaciji novih i tradicionalnih medija.