

Received: 03.04.2024  
Acceptance: 08.04.2024.

Original paper  
UDK 37.018.43:004.9  
DOI 10.7251/SVR2428113P

## STUDENTS' ASSESSMENT OF THE POSSIBILITIES AND ORGANISATION OF ONLINE TEACHING

**Asim Praskić, Full professor, PHD,<sup>1</sup>**  
**Maja Trifunović, Assistant professor<sup>2</sup>**  
**Aleksandra Antunović<sup>3</sup>,**  
**Isidora Timkov Glumac<sup>4</sup>**

### **Abstract:**

The development of information and communication technologies brings numerous changes to everyday life, including learning and teaching. We live in a time when it is impossible to imagine performing certain activities without the use of modern technology and devices. The development of technology has also impacted the education system implemented in schools. Technology is a part of the process of modern education, with online teaching being an important segment. Online teaching is increasingly being implemented alongside traditional teaching methods or is completely replacing them. Therefore, it is important to examine the possibilities of implementing online teaching in our context. Through the use of modern technology, teaching becomes dynamic, and students become more active and motivated. This paper explores the assessment of the possibilities and organization of online teaching from the perspective of students. In cases where regular teaching cannot be carried out or as a supplement to regular teaching, there is a need for online teaching. The primary objective of this paper is to identify the possibility of implementing online teaching.

The paper highlights that integrating new technologies into all aspects of the educational process contributes to more efficient education. We believe that the results obtained will greatly assist in organizing online teaching. Research results show that students are familiar with the terms of online teaching, and with the possession of digital devices, it is possible to implement online teaching synchronously, asynchronously,

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1 Full professor, Nezavisni univerzitet Banja Luka, Veljka Mladenovića 12e, e-mail:asim.prskic@nubl.org

2 Assistante professor, Nezavisni univerzitet Banja Luka, Veljka Mladenovića 12e, e-mail: maja.trifunovic@gmail.com

3 MA Osnovna škola Branko Radičević, Banja Luka,

4 dipl. inž. elektr., Mtel Banja Luka

or through hybrid learning. The significance of feedback from teachers on homework assignments is of great importance in the teaching process, both in traditional and online learning. Through research, we have confirmed that with proper organization and engagement of all participants in the teaching process, online teaching can be equally effective as traditional classroom teaching. There is no preference among students for traditional teaching or online teaching; students would prefer certain content to be taught traditionally in the classroom and certain content via online platforms.

**Keywords:** *teaching, online teaching, students.*

**JEL classification:** I20

## **PREFACE**

Online teaching is one of the modern approaches in the education system. Modern education requires changes in the traditional education system, and therefore it is important to provide conditions for active learning of students, as well as teacher training. It is necessary to acquire competencies and digital skills of students and teachers that can be applied in other spheres of life and learning in different ways.

### **1. DEFINING BASIC TERMS**

Every study, including ours, starts from theoretical assumptions and knowledge acquired in earlier research and studies. In order to approach a problem, it is necessary to first know what has been achieved in that area through studying the literature, understanding the basic terms and defining them. In the title of our paper: “Student’s assessment of possibilities and organization of online teaching” we find key concepts, which we will explain in more detail below. Those terms are:

1. possibility,
2. organization,
3. student,
4. teaching and
5. online teaching

#### **Opportunity**

A possibility, a possible, a feasible solution, a possible way out, an opportunity that offers a better prospect of making something happen. Possibility precedes reality. Some feature or objective possibility becomes a reality when some set of conditions are met.

#### **Organization**

Organization is a ambiguous term, the use of which without knowing the content of the terms it refers to can lead to misconceptions and misunderstandings. From the four basic meanings of the term “organization”, we single out one from the free encyclopedia Wikipedia that best suits the needs of our work:

“a set of activities undertaken with the aim of establishing such functional relations between the elements of the object that will enable the efficient realization of the purpose of its existence - activity”. Therefore, the term organization in our work implies the undertaken activities of teachers and students that enable effective implementation of online teaching.

#### Student

The term “student” means every student, regardless of whether he attends classes regularly or part-time. The student participates in activities aimed at his education, upbringing, socialization and building an independent, free and critical personality. In our work, the term student is gender neutral and applies equally to members of both sexes, unless otherwise stated in the text.

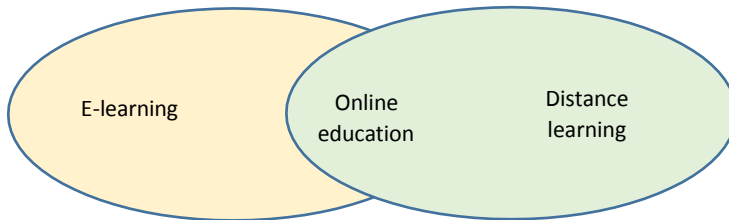
#### Teaching

Teaching is one of the basic didactic concepts. “Teaching is a unique educational process that takes place in a planned and systematic manner under the leadership of a teacher, with one relatively permanent group of students, with the aim of their adoption of socially verified program content and the development of all their potential to their personal maximum” (Branković, et al. 1999, p. 97). Teaching is a continuous educational process based on goals, teaching contents, means and spatial and working conditions. According to the dictionary of pedagogic terms, teaching is a multidimensional system of didactic procedures and communications that achieve the goal and tasks of teaching, and it can be achieved directly or indirectly. Although the authors cite various definitions, most agree that teaching is a pedagogically designed and organized process with the aim of raising and educating an individual. Respecting the contents of the above definitions, Ilić states that teaching “(...) is a unique educational process that is carried out planned and systematically under the leadership of the teacher in a didactically appropriate and materially and technically provided environment with the participants, with the aim of their adoption of socially verified program contents and developing their potential to their personal maximum” (Ilić, 2020, p. 56). Teaching, therefore, implies planned and organized upbringing and education of students in accordance with the current curriculum.

### Online teaching

The term distance learning and online teaching partly complement each other. The term online has the status of a foreign word in our language and, like other foreign words, it must be written in italics in the text. During the implementation of online classes, the participants are not present together in the classic classroom. During the implementation of this type of learning, the student performs the given tasks and obligations, but is not present in the classroom during the lesson, nor is the teacher. In addition to formal education, online training is also available via distance learning.

There are many definitions of online teaching. “Online teaching means a form of education that is exclusively realized through digital technologies and the Internet. It is the most effective and the most modern form of distance education. The teacher creates a stimulating environment for learning, leads and directs the work of students, learning is realized through various activities, the student takes greater responsibility for his learning, a high degree of flexibility and individualization in work is enabled” (Online and hybrid learning, 2021, p.2).



*Image 1: Definition of online learning*

*(Milivojević, V., Selaković, Ž., Radosavljević, K., Vukajlović, Z., 2020.)*

## **2. DEVELOPMENT PERIODS OF DISTANCE LEARNING AND ONLINE LEARNING**

The development of distance education was present in the USA in the 1950s through radio broadcasts and correspondence schools, with the aim of making it available to students who cannot attend classes, enabling them to master school programs and acquire certain qualifications.

In Great Britain, the USA, France and Germany, the first correspondence courses in shorthand using postal services were implemented. Later, using audio technology (radio, telephone, film, video), one-way and two-way communication takes place. Today, distance learning is realized through

websites, video conferences, discussions, etc. Therefore, education, that is, distance learning, has existed for more than 100 years, but with the advent of the Internet, it gained a new dimension” (Pokorni, 2009, p. 139). The use of technologies enabled interactive teaching in distance education, which was made possible by the emergence of educational software, or courseware. “The Internet was quickly incorporated into the education system in the USA” (Dmitrović, 2005, p. 65). Special progress in the use of computers for education was made possible by the multimedia CD-ROM technology, and a kind of revolution in distance education occurred with the development of the World Wide Web. “Many different technical means are often used in this type of teaching. Thus, in distance education, computers and television are often used in parallel” (Vilotijević, 2008, p. 215). Online learning includes learning through recorded lectures, video conferences, the existence of a virtual classroom, electronic assessment, learning materials in digital format.

### **Advantages of online teaching**

The advantage of online learning is the ability to learn from anywhere at any time and the availability of teaching content at any time. (Marčićević, Ž., 2010). The advantages of online education compared to traditional learning are: availability, time saving, adaptation to individual student capabilities, engagement of all senses, insight into one’s work, monitoring of student progress, objectivity in assessment and application of programmed and project teaching. Online education offers students the following advantages: students learn when it suits them, the teaching material is more interesting, there is constant feedback on their work. Online education gives teachers the opportunity to see how successful students are in learning, so that they can further plan their work. Tests and other forms of knowledge testing are not subject to the halo effect (Šćepanović et al., 2019).

Online learning can stimulate the activity of introverts, who become more active. Stereotypes are minimized in online learning. The application of information and communication technology in educational work contributes to students’ information and media literacy.

## **Disadvantages of online teaching**

Online learning is accompanied by certain disadvantages. Pande, Wadhai, Thakare (2016) list the following disadvantages of distance education:

- online requires students to be highly motivated to work and have time management skills
- e-learning methods may be less effective than traditional methods
- online can negatively affect students' communication skills
- cheating and illegal activities can be expected during the knowledge test.

Among the shortcomings, the necessary possession of appropriate equipment and access to the Internet can be distinguished, a high motivation to master the material is also necessary, a continuous Internet connection is needed, a device through which to teach, and a greater degree of commitment and creativity of the teacher in order to be able to engage the students.

## **3. RESEARCH ANALYSIS**

### **Significance of the problem**

The problem of our research is the assessment of the possibilities and organization of online classes. With online teaching, we encourage students to do their own research and are more motivated to study independently.

### **Problem location**

In our teaching practice, the need to introduce online teaching arose suddenly in 2020 with the emergence of an epidemic caused by the SarsCov2 - Covid 19 virus. Existing literature speaks in favor of conducting online teaching, but in our teaching practice, this type of teaching was not recorded until 2020.

The essence of the problem: in the case of impossibility of realizing regular classes or as a supplement to regular classes, there is a need for online classes. It is necessary to acquire competencies and digital skills of students and teachers applicable in other spheres of life. Students should be encouraged in different ways of learning and education should be directed accordingly.

### **Subject of the research**

The subject of the research is an overview of students' conceptual knowledge of online teaching and their affinity for the possibilities of application in the teaching process.

### **Objective of the research**

The objective of this research is to investigate the students' attitudes about the teaching and to check to what extent they consider the mentioned form of teaching satisfactory so that they can continue with this type of learning in the future.

### **Research tasks**

#### *Research tasks*

Determine if students know online learning terms.

### **Hypothesis**

We assume that most students know the basic concepts related to online teaching/learning.

## **Research methods, techniques and instruments**

In this paper, methods, techniques and instruments were applied, which were selected in accordance with the problem, subject, goal and tasks of the research. A descriptive method was used in the creation of this micro and ex-post-facto research that will be conducted within two schools. The applied methods in this work are: the method of theoretical analysis and synthesis, and the historical method. Within the framework of the descriptive method and in the collection of facts, a survey technique and a questionnaire instrument were applied. The questionnaire consists of closed, open and combined questions.

## **Statistical procedures**

After the realization of the research and summarization of the collected data, their statistical processing was started. The preparation and processing of data for statistical analysis was done in Microsoft Excel 2016. During data processing, the  $\chi^2$  test (chi-square) statistical procedure was used, which is very practical and often used, and serves to determine whether the obtained - observed frequencies deviate ( $O_i$ ) from

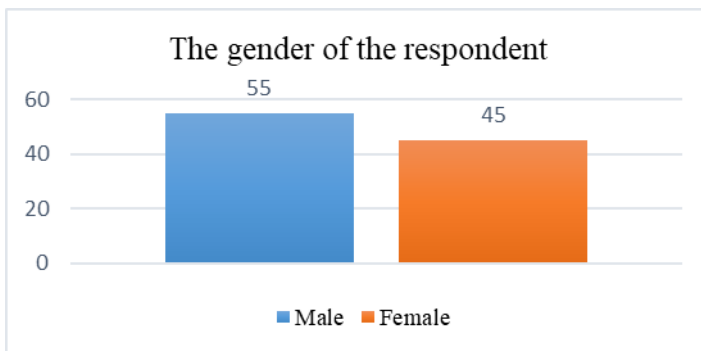
the frequencies we would expect with certain hypotheses (theoretical or expected frequencies -  $E_i$ ).

### **Research interpretationsample**

The research population consists of fourth-grade students from Junior Primary School “BrankoRadičević” and Junior Primary School “Georgi Stojkov Rakovski” Banja Luka. The sample included four classes of the fourth grade. The sample consists of 100 students.

		Are you familiar with the concept of online classes?							
SUBJECTS	STUDENTS	I am not at all familiar with this term		I've heard of it, but I don't know what it means exactly		I know exactly what it means		TOTAL	
		F	%	F	%	F	%	F	%
		2	2,00	5	5,00	93	93,00	100	100,00

*Table 1.: Knowledge of the concept of online teaching*



*Grafikon 1. Comparative graphic representation of gender representation in research*

One hundred students participated in the research, 45 girls and 55 boys (45% girls and 55% boys). We can conclude that both genders are almost equally represented in the research, i.e. that the gender structure of the sample is uniform, which contributes to the quality of the research.

For the needs of online teaching/learning, a virtual learning environment has been created that enables indirect communication through hardware and software to teachers and students. Realizing online teaching is not possible if the majority of students do not know the concept of online teaching or the basic terms related to online teaching/learning and have participated in the same.



We assume that most students know the basic concepts related to online teaching/learning and have participated in the same

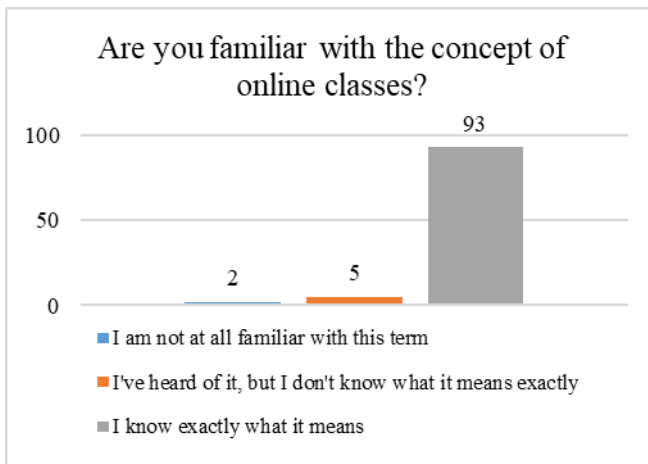
Are you familiar with the concept of online classes?

- I am not familiar with this term at all
- I've heard of it, but I don't know what it means exactly
- I know exactly what it means

		Are you familiar with the concept of online classes?							
SUBJECTS	STUDENTS	I am not at all familiar with this term		I've heard of it, but I don't know what it means exactly		I know exactly what it means		TOTAL	
		F	%	F	%	f	%	F	%
		2	2,00	5	5,00	93	93,00	100	100,00

Table 2.: Knowledge of the concept of online teaching

To what extent students are familiar with online teaching, we will see from the following graph:



Grafikon 2.: Comparative graphic representation of knowledge of the concept of online teaching

From table II and graph 2, we see that the obtained data confirm that the majority of respondents, 93.00%, are familiar with the concept of online teaching, while 5% have heard about it but do not know what it means exactly. 2% of respondents are not at all familiar with the term online classes. Therefore, students are familiar with the term online teaching and know what it means exactly. We hereby confirm that the

selected sample is representative in terms of credibility in our research. We would not be able to carry out the research if the students were not familiar with the concept of online teaching.

We investigated whether there was a statistically significant difference between our distribution and a random distribution to determine whether students were familiar with the concept of online teaching.

<b>Empirical result (O<sub>i</sub>)</b>	<b>Theoretical result (E<sub>i</sub>)</b>	<b>Deviation (O<sub>i</sub>-E<sub>i</sub>)</b>	<b>Squared deviation (O<sub>i</sub>-E<sub>i</sub>)<sup>2</sup></b>	<b>(O<sub>i</sub>-E<sub>i</sub>)/ (E<sub>i</sub>)</b>
2	33,33	-31,33	981,78	29,45
5	33,33	-28,33	802,78	24,08
93	33,33	59,67	3560,11	106,80
100	100			

<b>P value (probability)</b>	0,05
<b>Degrees of freedom (df= number of categories-1)</b>	2
<b>Hi squared <math>\chi^2 = \Sigma ((O_i-E_i)^2 / (E_i))</math></b>	160,34
<b>Marginal <math>\chi^2</math> (5%)</b>	5,99
<b>Conclusion</b>	There is a significant statistical difference

Based on the obtained data processed by the Chi-square method, we conclude that the difference is statistically significant (P=0.05). Students give the answer “I know exactly what it means” significantly more than the other answers about knowing the concept of online classes. With this procedure, we confirm that the hypothesis that most students know the basic terms related to online teaching/learning is supported.

## **CONCLUSION**

Online teaching enables lifelong learning, which is the key outcome of the curriculum. The development of modern technology makes it possible for physical dislocation not to be an obstacle to the acquisition of knowledge. The pandemic of the corona virus COVID-19 contributed to the spread of online classes in our country as well. Through the analysis of the available literature and the conducted research, this paper points out the advantages and disadvantages of this method of education, as well as the possibility of realizing online classes. The basic prerequisite is that students are familiar with the term online classes and know exactly

what it means. Thus, the chosen sample is representative in terms of credibility in our research. We would not be able to carry out the research if the students were not familiar with the concept of online classes. The advantages of online learning are numerous. Students are not limited by time or place of learning. In asynchronous learning, the student can access the materials at any time. Synchronous online learning enables real interaction between students and lecturers. Online teaching is not an alternative to the existing educational process, but rather its upgrade.

## **PROCJENA MOGUĆNOSTI I ORGANIZACIJE ONLINE NASTAVE OD STRANE UČENIKA**

**Asim Praskić,  
Maja Trifunović  
Aleksandra Antunović  
Isidora Timkov Glumac**

### ***Apstrakt:***

Razvoj informacionih i komunikacionih tehnologija donosi brojne promjene u svakodnevni život pa i u učenje i podučavanje. Živimo u vremenu kada je nemoguće zamisliti obavljanje nekih djelatnosti bez upotrebe savremene tehnologije i uređaja. Razvoj tehnologije nije zaobišao ni sistem vaspitanja i obrazovanja koji se realizuje u školi. Tehnologija je dio procesa savremenog vaspitanja i obrazovanja, čiji važan segment je onlajn nastava. Onlajn nastava se sve češće realizuje uz tradicionalnu nastavu ili je potpuno zamjenjuje. Zbog toga je važno ispitati mogućnosti realizacije onlajn nastave i kod nas. Upotrebom savremene tehnologije nastava postaje dinamična, a učenici aktivniji i više motivisani za rad. U ovom radu istražujemo procjenu mogućnosti i organizacije onlajn nastave od strane učenika. U slučaju nemogućnosti realizacije redovne nastave ili kao dopuna redovnoj nastavi, javlja se potreba realizacije onlajn nastave. Osnovni cilj ovog rada je identifikovati mogućnost realizacije onlajn nastave.

U radu je ukazano da integrisanje novih tehnologija u sve aspekte obrazovnog procesa što doprinosi efikasnijem obrazovanju. Smatramo da će dobijeni rezultati u velikoj mjeri pomoći organizaciji onlajn nastave. Rezultati istaživanja pokazuju da učenici poznaju termine onlajnnastave te je uz posjedovanje digitalnih uređaja moguće realizovati onlajn nastavu sinhrono, asinhrono ili hibridno učenje. Značaj povratne informacije od učitelja/nastavnika na izradu domaće zadaće je od velikog značaja u nastavnom procesu, tako i u onlajn učenju. Istraživanjem smo potvrdili da uz pravilnu organizaciju i angažovanje svih učesnika nastavnog procesa onlajn nastava može biti jednako efikasna kao i tradicionalna

nastava u učionici. Prefrencije učenika tradicionalne nastave ili onlajn nastave nema, učenicima bi odgovaralo da se određeni sadržaji obrađuju tradicionalno u učionici, a određeni putem onlajn platforme.

**Ključne riječi:** *nastava, onlajn nastava, učenici*

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