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Do We Talk to a Wall or Pass on Knowledge to Students – The Advantages and Disadvantages of Online Learning

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INTRODUCTION

Digitalization has affected all business sectors as a direct consequence of maintaining social distance necessary for the prevention of COVID-19 infection spread. It represents an effective means of improving all processes and solving all problems we encounter in an easier way in the shortest possible time. Changes in consumers' lifestyle have initiated changes in the business activities of certain companies so that some new needs and requirements which now exist in the market can be met (Lazarević & Marinković, 2021). Education, as one of the key teaching terms, is understood to be the center of the educational process (Nikčević, Krulj, Krulj-Mladenović & Jokanović, 2021). Digitalization of education is no longer an unfamiliar term for us; as a matter of fact, it is something that we have been dealing with on a daily basis for the last three years. Inevitably, various advantages and disadvantages of the digitalization of education have become apparent during this period, but all problems now require less time to be solved. Both students and teachers seem to have overcome the initial obstacles they faced upon the introduction of a new way of teaching. In addition, we must take into account the fact that many countries in the world even before the pandemic had had an inefficient education system, while a large number of the population is still digitally illiterate. This has had a negative impact on the adaptation to digital learning in less developed countries (Pavlović, Ivanišević, Radišić & Lošonc 2021).

A great influence that advances in technology have on education cannot be denied, and the transition to online teaching requires a reorganization of teaching itself (Khadijah, Kainat, Mahwish & Ahsan, 2020; Fernandez-Altuna, Rayon, Resendiz, Mendez & Lopez, 2020). Nowadays, classes, whether online or offline, cannot be imagined without the use of technology, and the possession of information and communication technologies is not a single prerequisite for conducting classes - one should also know how to use them. The successful digitalization of education

Abstract: In the era of digitalization, boosted by COVID-19 pandemic, there is a constant need to measure the success of digital education, compare and reappraise its positive and negative outcomes, which are mainly dependent on the technical conditions available, as well as on the extent to which the previous knowledge of teachers has been adapted to practical and technical challenges. The aim of this paper is to present an analysis of the advantages and disadvantages of digitized education as perceived by students in a qualitative survey, conducted in 2021/22. The starting point were two hypotheses related to positive aspects and two hypotheses related to negative aspects of online learning. An in-depth interview was conducted among 20 high school and 20 university students. By analyzing the results obtained, and juxtaposing them with the data taken from a quantitative survey administered prior to the qualitative one, in 2020/21, it is possible to compare the changes that took place and gain a better insight into the entire process, which has undergone certain improvements, but which also leaves room for further enhancement, particularly in terms of students' and teachers' motivation to actively engage and interact. This would help students overcome their distrust of online education.

Keywords: *Digitalization, education, pandemic, online platforms*

was enhanced by the participants themselves, i.e. pupils and students, because without their commitment, mastering new skills and creating a working atmosphere nothing would be possible (Crittenden, Biel & Lovely, 2019). It is the mindset of new generations, raised on smart phones, computers and the Internet, that played an important role in adapting to a new set of circumstances in education, generated by the COVID-19 pandemic. This is why all innovations in e-learning must support both learning and teaching, both students and lecturers. All the needs and dissatisfaction of students must be carefully and continuously considered in order to react as soon as possible. This hopefully leads to greater satisfaction of the participants and greater success of the online teaching process, and, therefore, to a better cooperation between lecturers and students, which is, according to Barjaktarović, further ensured by the three features embedded in the ICT: communication, interaction, and collaboration (Barjaktarović, Stanković & Gavrilović, 2014).

There are two types of online teaching: the first way of conducting classes is in real-time, when both professors and students communicate directly, i.e. synchronously, in a live lesson broadcast over some video applications, and the second way is to place video materials on platforms so that students can access and watch classes at any time. Needless to say, direct contact between teachers and students, as though they were together in the classroom, leads to better learning outcomes and promotes students' independence. In addition, this type of online teaching is constantly being improved by different kinds of platforms and tools, including Artificial Intelligence, Machine Learning, gamification, Internet of Things, which allow teachers to organize classes in a variety of ways (Bošković, Lalić & Mili; Guseva & Khaziakhmetova 2020).

The outspread of the COVID-19 pandemic accelerated the already present process of digitalization and compelled teachers and students to advance the use of ICT in classes so that, at the moment of urgency, they would be equipped with technological knowledge, able to adequately replace traditional teaching with online teaching. Indeed, lecturers had a very difficult task - to overcome the challenges that the digitalization of education brings, all to make it easier for students to master the material. A definition of a modern lecturer thus lists a range of skills necessary for the role. Those skills are diverse: (Vaskov, Isakov, Bilovus, Bulavkin & Mikhaylenko, 2021)

- The lecturer should be communicative;
- The lecturer should also possess managerial skills in order to organize classes as successfully as possible;
- The lecturer should be informed about everything - general knowledge should be at a high level;
- Possession of cognitive, social, and psychological skills has a direct impact on the quality of teaching and creates a positive impression of the lecturer;
- Possession of digital skills - the ability to use multiple programs at the same time, as well as the ability of lecturers to inspire and encourage students to use the same programs in the right way.

According to Cheung and Cable there are eight principles of effective online teaching framework. Those principles are: technology application, student faculty contact, collaborative learning, active learning, prompt feedback, time on task, high expectation, diversified learning (Cheung & Cable, 2017). When it comes to collaborative learning, students encourage each other to work while sharing knowledge and experiences. In this way they achieve common goals related to mastering the material. Research by Bell and Kozlowski has shown that knowledge is retained for a longer period of time through active learning, students are more motivated to learn, and the material is understood better. In addition to all of the above, positive attitudes about the subject itself are created, because, through understanding, students overcome all the prejudices they previously had about the material (Bell & Kozlowski, 2008).

Furthermore, unlike books, which come exclusively in a textual and pictorial form on paper, e-learning materials have multimedia capabilities and provide an opportunity of distance learning in real-time. Therefore, online education is available to everyone wherever they are, 24 hours a day, 7 days a week, without any time and money expenditure on participants' part (going to the places where classes are held).

To raise the efficiency of online teaching, some of the suggestions to educational institutions are: (Sun & Chen, 2016)

- Well-designed course content: the interaction between teachers and students should be important so that all participants are well motivated; lecturers should prepare the necessary materials for classes on time;
- Having a sense of community in online learning is crucial;

- Technology is advancing at a high speed, so it is necessary to follow all the changes and introduce them on time into the already existing ways of teaching.

Besides all the educational and economic roles of educational institutions, their social role in eradicating the pandemic is the most important for all participants in education (Wang & Zha, 2018). This sudden situation which led to an unplanned experiment in teaching seems to have proved successful. Teachers and students managed to adapt to technology and all innovations in a short period of time. Thanks to the "forced" transition to e-learning, new horizons and opportunities have opened up (Marinoni, Land & Jensen, 2020). It is assumed that distance learning can be evaluated positively. For that reason, there is a tendency for this way of working to be implemented in traditional teaching in the future.

All things considered, the new way of teaching and learning did initiate great changes, which was inevitable. It also gave rise to a number of research papers, with numerous studies conveyed around the world only to prove that both the satisfaction and dissatisfaction of teachers and students are determined by various factors. Needless to say, the list of advantages and disadvantages of digitalization in education is quite long and is largely influenced by the part of the world, i.e. the conditions, in which the teaching and learning process takes place.

ADVANTAGES OF DIGITALIZATION IN EDUCATION

What students generally perceive as the main advantage of digitalization in education is flexibility in organizing their schedule, especially when it comes to saving time, and money as well, on commuting. Time saved on commuting can be allocated to extracurricular activities. Students can discover and develop some new talents; they have more time to read literature that is not provided in the curriculum and they can be more physically active than before (Fatonia et al. 2020). Furthermore, it is less likely that classes will be suspended, or that professors will not appear due to unpredictable weather or other inconveniences. Students do not have to worry about how much time they need to prepare for classes. Materials are always available on the platforms and they can be downloaded at any time (before, during or after classes) (Kaličanin et al. 2021). In addition to having more free time, anoth-

er advantage concerns the place from which students will attend lessons. Now they can access lectures from any device on which they have internet access, regardless of where they currently are.

All these contribute to greater independence of students in mastering the learning materials (Firmansyah, Putri, Wicaksono, Putri & Widianto, 2021). With time flexibility comes greater autonomy and hence better time management skills, as organizing one's time in such a way that it is possible to handle and fulfil both private and school obligations indeed represents a challenge (Hamid, Sentryo & Hasan, 2020). Online education is a great option for people who have jobs and who are struggling to combine studying and working and balance between the two. That is why for those people who have a non-standard schedule and must incorporate studying into regular daily activity it is more convenient to have all the materials online. Furthermore, the fact that students are now more independent in mastering the material and in organizing their time can only have positive effects on their lifelong learning (Mukhtar, Javed, Arooj & Sethi, 2020).

Flexibility as an advantage of online learning can also be seen from the perspective of students who, with the onset of digital education, began to feel more comfortable in their own skin. Those who are timid can now message professors in the chat, and in that way have their questions answered and doubts resolved directly, without other students being involved. This group of students face quite unpleasant situations when attending classes live, because they do not want to express their opinion or misunderstanding of the material in public (Mukhtar et al. 2020).

Greater knowledge and progress in the use of different platforms and programs, as well as the improvement of technical skills, are certainly considered a positive aspect of online learning. Students have to learn how to use online platforms, upload files as part of their homework assignment, navigate so many different programs just to attend classes and earn extra points for attendance and activity (Mirkholikovna, 2020). There are many applications and platforms that are available to educational institutions around the world, and that allow unlimited uploading of files and videos, which indeed facilitates both the process of knowledge transfer and mastering the material. In addition, the chat reaction button encourages students to feel free to express their satisfaction or dissatisfaction (Tian & Wu, 2022).

Another advantage of online learning, highlighted by Jordanian instructors, is its quality of being an

effective learning tool. Through e-learning, students are encouraged to use different tools more often and prepare multimedia content for different subjects. The idea of creating multimedia brings with it the stimulation and development of students' creativity, and for that reason, it is no longer so boring and difficult for students to learn and get good grades (Haidar & Al-Salman, 2020). They also agree that, apart from enhancing their creativity, e-learning has equally positive effects on students' confidence, their greater engagement, and active interest in mastering materials and writing homework.

Intensive research and numerous in-depth questionnaires lead to the conclusion that asynchronous learning has many advantages for teachers, too, because it does not limit their time in terms of posting and arranging study materials. They have programs at their disposal that make the whole process easier for them and ensure that the outcome is immediately visible to students. Even when students have special requests, they can be handled and answered individually in almost no time. Undeniably, once they have mastered the use of technology, lecturers will have more time on their hands (Daniel, 2020).

DISADVANTAGES OF DIGITALIZATION IN EDUCATION

There are certain barriers that can affect the digital transformation but cannot be overcome easily, for instance, the existing outdated resources and capabilities of educational institutions. Furthermore, the experience people have, their skills and working abilities, as well as their culture, identity, and way of thinking are crucial for easier or harder adaptation to a new way of working and everyday functioning under unexpected circumstances (Vial, 2019). Digitization of education has also led to changes related to the feelings and general health of students: (Ma, Bai, Dai & Wang, 2020)

- It might be difficult to maintain concentration for learning,
- Online learning can lead to isolation and loneliness,
- Students can get bored in online classes,
- Unexpected network problems can cause disruption of live streaming.

Distractions which can be faced in classes usually refer to taking notes on laptops and other smart devices. One study conducted among students revealed that listening to lectures and taking notes on laptops at the same time can be less productive and more difficult than taking longhand notes (Mueller & Oppenheimer, 2014). Similarly, in online learning students' attention can be easily diverted and their focus fragmented as they are exposed to more distractions (from electronic devices to the household members). Also, they tend to miss, or even skip, the deadlines for submitting homework (Coman, Țîru, Meseşan-Schmitz, Stanciu & Bularca, 2020).

In a survey conducted at the beginning of 2021, the aim of which was to collect and analyze students' opinion on online learning, respondents aged 18 to 25 stated that what they wanted and genuinely expected was to have more interaction with lecturers. They pointed out that there must be a greater interest on the part of professors to make lectures as interesting as possible, rather than simply tell the theory (Kaličanin et al. 2021). Evidently, talking to a wall, or as a matter of fact to a screen, is not something that concerns only teachers; it represents a major stumbling block to successful learning even from students' perspective. One of the questions in the questionnaire was "*Would you continue your education in this way in the future*?" and most of them (66.2%) chose the answer "*No, because I think that going to classes and socializing are important*" (Kaličanin et al. 2021). So, it can further be concluded that another significant disadvantage of online learning is lack of socialization with classmates and lecturers. This can cause many other problems because staying at home alone and not having the support of other peers is not desirable at that age. Informal communication with peers and professors is irreplaceable. Meeting new people, making friends, as well as making some big business ventures also take place in live classes and there are not so many opportunities for that in online lectures. In addition, some authors agree that limited emotional communication with lecturers has a negative influence on students and that the absence of nonverbal communication can also cause difficulties in understanding the material (Ma et al. 2020). Undeniably, the environment in which technology clamours for attention, compelling students to attend to multiple streams of distracting information, has a detrimental effect on their performance as it reduces interest in learning and makes it more difficult for them to create work habits and master the target material in time. A questionnaire conducted among students in India gave similar results: a problem with students' concentration during online classes is among the leading shortcomings; in addition, they have a lot of problems with the Internet connection. The vast majority of students, 77.14%,

agreed that conducting live classes had a positive impact on students' self-confidence and easier mastering of the material (Kumar, Singh, Bhatnagar, Gupta & Upadhyay, 2020).

Another shortcoming underscored by the research in the Philippines is that professors fail to convey knowledge successfully, i.e. the materials defined by the subject syllabus are not presented completely and accurately. Whether they simply do not manage to teach everything according to the teaching plan and learning programme or, for some reason, depart completely from the plan and teach a different lesson beyond the syllabus and materials students have, teachers deprive their students of information needed for comprehensive knowledge (Fatonia et al. 2020).

On the other hand, a survey conducted in Russia stated students' passivity as one of the disadvantages of online education. This means that students are inert and unresponsive while getting acquainted with new information, thus failing to provide feedback on their comprehension. They do not know what they have just read or what has just been said. It is much easier for them just to sign in so that they seem to be present, but not to be active and answer professors' questions (Yureva, Burganova, Kukushkina, Myagkov & Syradoev, 2020). Another survey conducted online among 80 teachers identified the same problem: students are not active enough. Their interest in a certain topic cannot be measured based on the stated results, but it is evident that students are not as active as in regular classes. Only 50% of students actively participate in all activities, 33% of students occasionally get involved, while 17% of students do not participate at all or interact very rarely (Fahmalatif, Purwanto, Siswanto & Ardiyanto, 2021).

Finally, not all deficiencies relate directly to students. As online teaching implies new studying conditions, parents play a vital role in the learning process. They provide active support in children's mastering of materials and they should be kept informed and up to date on any changes regarding the class schedule, required materials, assignments, and due dates so that any problems that might occur could be overcome successfully and quickly. However, one of the obstacles that may stand in the way in this case is the fact that not all parents are digitally literate to manage online learning platforms. Consequently, lower-grade students are not able to achieve their maximum results (Ranđelović, Karalić & Đukić, 2020). Another change that parents have observed in their children's behavior during online classes is lack of work habits. For this reason, parents now set aside much more time to devote to helping their children master the material (Yureva et al. 2020).

RESEARCH

This paper examines the data obtained in an in-depth interview, conducted during the second semester of the 2021/22 school year, with the aim to identify the key advantages and weaknesses of online education as perceived by students. It analyzes the changes that occurred regarding the design and organization of online classes, attempting to deduce whether students would opt for this type of learning in the future. Based on the above-mentioned advantages of online learning, the starting hypotheses of the research were defined as follows:

H1: Online learning allows access to classes and materials anywhere and anytime.

H2: Online learning leads to better motivation in learning.

Not being used to this type of education, students tend to consider face-to-face teaching more serious and easier when it comes to mastering the material. Therefore, two more hypotheses were added to the in-depth interview, with the same aim, i.e. to identify the key advantages and weaknesses of online education, as well as to see whether students would opt for this type of learning in the future. These hypotheses are:

H3: Online learning limits peer socialization.

H4: Online learning would be a choice only if there were no other options.

The participants in the interview were 20 high school students and 20 university students, with 10 female respondents and 10 male respondents in each group. The age of the high school students was between 17 and 18, while the age of the university students was between 20 and 25. The interview was conducted live in high schools and colleges and lasted up to an hour. Participation in the survey was voluntary and anonymous. All the respondents attended online classes during the previous two school years, and some of them still had the option to choose whether they wanted to attend lectures online or in person. Since there were two groups - the first group consisting of high school students, the second group of university students, the coding of the respondents was performed as follows: those belonging to the first group were coded as 1.1., 1.2... to 1.20., while the members of the second group

TABLE 1: Advantages and challenges of online education

Question	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied	Mean
Availability of lectures	16 (10.1%)	13 (8.2%)	26 (16.5%)	21 (13.3%)	84 (53.5%)	4
Comprehensibility of the material	5 (3.2%)	11 (7%)	41 (26.1%)	51 (32.5%)	49 (31.2%)	3.8
Detailed analysis of the material by professors	3 (1.9%)	9 (5.7%)	37 (23.6%)	48 (30.6%)	60 (38.2%)	4
Easier mastering of materials online	62 (39.4%)	25 (15.9%)	28 (17.8%)	17 (10.8%)	26 (16.5%)	2.5
Individual work with students	47 (29.9%)	41 (26.1%)	37 (23.6%)	17 (10.8%)	21 (13.3%)	2.6
Public expression of opinion	41 (26.1%)	19 (12.1%)	35 (22.2%)	23 (14.6%)	40 (25.4%)	3
Satisfaction with communication with professors	10 (6.4%)	19 (12.1%)	36 (22.9%)	48 (30.6%)	44 (28%)	3.6
Saving time on commuting.	16 (10.1%)	13 (8.2%)	37 (23.6%)	18 (11.4%)	78 (49.6%)	3.9

SOURCE: Education is Becoming Digital – The Youth Attitudes towards Online Teaching during the Covid-19 Pandemic (Kaličanin et al. 2021)

were coded as 2.1., 2.2... to 2.20. The survey included 8 multiple choice questions and 3 open-ended questions, followed by conversation. A Likert scale was used for two multiple-choice questions.

Out of twenty university students, 16 declared that the teaching was interactive and that they actively participated and joined in discussions. Four of them said that they did not have the opportunity to get involved and/or ask questions, as well as that the lecturers were not willing to hear their opinion. As for the second group of the respondents, all the high school students gave the same answer – that the teaching was rather interactive and that they too were active participants in discussions. The first of the two questions for which a Likert scale was used concerns the rating of teachers' dedication to explaining the materials, from 1 – the lecturers are not at all dedicated to 5 – the lecturers are very dedicated. The answers of the university students in percentages are as follows: 3 students said that the lecturers were not dedicated, 6 students said that the lecturers were dedicated, whereas most students, 11 of them, agreed that the lecturers were very dedicated. On the other hand, the answers of the high school students are the following: 3 high school students said that the lecturers were not dedicated, 4 students had neutral attitude, 10 of them said that the lecturers were dedicated, while 3 of them declared that the lecturers were very dedicated. The second of the two questions concerns the comprehensibility of the learning materials, where 1 indicates very confusing materials and 5 very comprehensible materials. As for the university students, 7 of them said that the learning materi-

als were very comprehensible, whereas 9 of them said that they were comprehensible. On the other hand, 5 high school students stated that the learning materials were very comprehensible, 6 of them said that the materials were comprehensible, whereas most of them, 7 students, expressed a neutral attitude. When asked to identify the advantages of online education that they can confirm, the majority of both university and high school students highlighted the possibility of accessing classes anytime, anywhere, as well as saving time on transportation to their institutions. However, when asked about the disadvantages of online education related to lack of communication, freedom of expression and lecturers' reluctance to accept criticism, both university and high school students identified poor communication with the lecturers as the greatest disadvantage.

The data provided by this research can be compared with the results of the quantitative research, performed in the 2020/21 school year. It was an anonymous and voluntary survey, administered by means of a Google questionnaire, due to the pandemic caused by the COVID-19 virus. There were 157 respondents who took part in the research, 79 of whom were high school students and 78 university students. A Likert scale was used for the 8 statements given in the table. The answers were meant to reveal what the respondents were satisfied and dissatisfied with, as well as to point to students' similar attitudes towards the mentioned advantages and challenges of online education.

Based on the answers obtained in this research (Kaličanin et al. 2021), it is evident that the respond-

ents were very satisfied with the time they saved on transportation – 78 of them, with only 16 respondents expressing dissatisfaction. When it comes to the availability of lecturers, even 84 of them expressed satisfaction. On the other hand, 16 of them did not. Most of them, even 62, acknowledged that they were very dissatisfied with mastering materials online, as it was harder for them to learn this way, while 26 said that they did not have these problems. It is interesting that comments on the issue of public expression of their opinion in class were completely opposite: 41 were very dissatisfied, while 40 of them were very satisfied. Only 12 of them were dissatisfied and did not agree with the statement that professors processed and explained learning materials in detail, whereas as many as 108 of them responded to this statement that they were satisfied and very satisfied, with 37 participants not declaring themselves, i.e. they had a neutral attitude.

DISCUSSION

Analyzing the results of the quantitative research from the school year 2020-2021 and the in-depth interview conducted during the school year 2021-2022, it is possible to compare the changes that took place and thus gain a better insight into the entire situation. What can be concluded is that the opinions of students remained unchanged: they still believe that one of the main drawbacks of online education is lack of socialization with peers, whereas flexibility and independence in their organization of time, as well as the accessibility of classes, are identified as the main advantages. Many researchers around the world consider this question important, but the answers of the respondents do not completely coincide with those in other countries.

In order to examine the attitudes of the survey participants more systematically and collate the results, average scores on the Likert scale are classified into three categories: scores from 1 to 2.5 show a negative attitude; scores from 2.6 to 4 refer to a neutral attitude, whereas grades from 4.1 to 5 indicate a positive attitude (Živković & Brdar, 2018). The results obtained in the quantitative survey, shown in Table 1, show that as many as 39.4% of the respondents said that they did not agree at all that it was easier to learn and master the material while attending classes online, whereas 16.5% of them said they were very satisfied. In other words, the arithmetic mean of this statement is 2.5, which is the upper limit of a negative attitude. The

students shared the opinion that it was necessary to adapt the lessons to the new way of teaching and conveying knowledge, as modern technology provides a great deal of options that enable teachers to tailor and customize the teaching materials, make them more engaging, appealing and easier to follow, and thus respond to students' needs. The results further indicate that one of the things which students agree on is the accessibility of learning materials. Serbian respondents point out that communication with professors is very satisfactory (30.6% say they are satisfied, while 28% of them state that they are very satisfied). Furthermore, one of the biggest disagreements that is evident when comparing the results and conclusions of the research concerns mastering the material.

The answer to one of the questions all the participants were asked, „*Would you continue your education online if there is a choice?*" was almost unanimous - „No", but still the respondent (2.12.) stated that they would continue their education online in the future.

The two groups of respondents expressed completely different views on the following statements: „*During online classes I did not take learning seriously.*" – only the respondent 1.13. in the first group disagrees with the statement. On the other hand, the university students mostly agreed with the statement „*During online classes, I learned the same as when there are regular classes. I learn because of myself, not because of grades.*", except students 2.8., 2.10. and 2.15, who expressed disagreement. It can be concluded that university students approach their obligations more seriously.

Similarly, in the current school year, the students agree that the main advantages of online classes are the fact that it takes only one click to access the lecture, the availability of learning materials before and/or after classes, the availability of video recordings, the fact that there is no need to travel to the site of their institution, etc. Some of the advantages expressed by the pupils are:

Availability of the class materials and presentations, although I did not have the opportunity to attend the class at the time it was held. (1.4)

Greater availability of materials, no noise - we attend classes enjoying at the same time the comfort of home surroundings. (1.13)

Time saving, reduced possibility of being late for classes. (1.15)

Some of the advantages stated by the university students are:

Online education makes it possible for employed students to listen to lectures and videos and thus meet their study and exam obligations on time. (2.7)

It is really easier to study for exams because I can review the videos again at any time. As a result, there is less need for consultations with professors. (2.9)

It is much easier for me to take notes on my laptop while listening to online classes, because going over the material afterwards requires less time and effort. Furthermore, I feel less anxious when taking exams online. (2.10, 2.13)

The first group of respondents cited a large number of homework assignments as a big problem. The volume and time required for homework took away all their free time after classes, so they did not have time to socialize and perform other activities. They agreed that this was a big problem for them:

One of the key disadvantages of online learning is that the professors gave us a lot of homework. We didn't have free time after classes. (1.14.)

A big burden for us is the increased number of obligations, the most demanding of which, in terms of the time it takes to complete, is doing homework. For this reason, I did not have time to devote myself to socializing with friends and relatives. (1.15.)

Students feel that they do not benefit from doing homework. They complete it without thinking, trying to finish that task as quickly as possible.

As learning platforms are used on a daily basis, they can be taken for granted just like other technologies. Among the respondents there are those (1.5.) who stated that they did not study during online classes because they did not like this way of teaching: it had a bad effect on their motivation and mood.

One of the things that directly affects our motivation to study is that some professors just upload study materials, without even bothering to ask us if we understand everything and if we need any help to master the material. (1.13.)

Various studies indeed show that academic motivation is very important when talking about students' success in mastering the material. Better concentration, less stress when studying, more successful overcoming of obstacles - these are just some of the advantages of a motivated student (Malik & Akkaya, 2021; Kanık, 2021).

The university students face the same problem. Lack of motivation among some students and lack of desire to be active during classes have a bad effect on active students as well. Active students insist on finding a way to get everyone involved, because they get bored in class. Professors tend to engage the same students in conversation, those who attend classes regularly and who are always active. This clearly highlights how important the role of a teacher is in students' motivation.

I would add some interactive content where all students would have to participate in class (to be required to participate in order to receive attendance points) because it is boring to always have the same students active. (2.3.)

It is necessary to motivate a greater number of students attending classes to communicate more. A large number of students just show up to lectures to get attendance points, but they neither listen to the lectures nor participate in discussions. (2.4)

In order to encourage students to be active in class, more quizzes, like Kahoot, should be used to check understanding and facilitate learning. (2.11.)

Professors should listen to and respect students' objections because that way we get motivation to learn. (2.15.)

Technical problems encountered by students when attending online classes represent the most prominent shortcomings. They have a direct impact on the quality of classes, students' motivation, as well as their concentration. Students faced stressful situations when they could not attend classes on time or when their microphone or camera did not work, which was a mandatory condition for receiving points for attendance. Power outages, in addition to internet interruptions, are the most stressful situations they pointed out.

Problems with the internet connection caused a lot of anxiety among all the participants, especially when the professors had difficulty accessing the classes on time. (1.13)

Technical problems of other students caused great disruptions in the classes when they kept disconnecting and returning to the class or their microphone or camera did not work. (1.17)

Based on the conducted qualitative research, the advantages of online education that stand out in the foreground are the accessibility of learning materials and videos, possibility of attending or watching online classes from anywhere, any time, facilitated learning, saving time and money on traveling to classes. This

confirms the first hypothesis of the paper. However, the second hypothesis has not been confirmed at all. Namely, the respondents cited lack of motivation as a key problem in online education. Furthermore, even though the previous research reveals insufficient socialization among peers (H3) as the main disadvantage, the respondents of the qualitative research did not highlight this negative side of learning. Based on the research, we can see that students are most concerned about lack of motivation, an insufficient number of active students present, professors who do not want to try to involve more students in discussions, as well as technical problems, which means that the third hypothesis has not been confirmed. On the other hand, the survey has shown that there is great dissatisfaction with online classes, with 39 respondents agreeing with the statement that they would not opt to attend online classes if they had a choice. Therefore, hypothesis number 4 has been confirmed.

CONCLUSION

E-teaching has not only helped students and lecturers master the use of new platforms, but it has also given lecturers the opportunity to present learning materials to students in the most creative way possible and convey the necessary knowledge. If classes were to be organized in this way in the next school year, the Ministry of Education, Science and Technological Development of Republic of Serbia should think about how to improve various aspects of e-teaching. The aim of this paper was to examine positive and negative aspects of online teaching, based on the research conducted on a sample of 20 high school students and 20 university students.

One of the most positive aspects of online teaching, according to the research, is the availability of videos and learning materials in one click. Therefore, it is recommended that even those institutions that have not yet introduced this practice start using platforms that will make it easier for students to master the material in this way. Furthermore, as the new generations of students are completely familiar with the use of technology, and have replaced notebooks and pens (as a means of taking notes in classes) with smart devices, equipping classrooms in educational institutions with modern and high-quality equipment will substantially contribute to the achievement of better results. Last but not least, online teaching is cost saving for students who would otherwise have to travel to scool/university, as well as time saving for employed students who can, in this way, combine working and studying.

On the other hand, the unanimous answers obtained from the respondents indicate that if students had the opportunity to choose, they would not opt for online classes, which further emphasizes teachers' responsibility and the key role they play in arousing students' interest in subjects and enhancing their motivation for learning. It is important that teachers find a way to make all students who attend classes active, for it would encourage a positive attitude among all the students present. Moreover, as abundant homework takes away a lot of students' free time, teachers can get students engaged by propelling them to look for interesting facts about a specific topic that is provided by the curriculum. Finally, the negative aspect that should also be considered are technical problems, which could be easily solved with better internet connection.

Limitations of the research refer to the small number of respondents involved, as well as to the short period of time for data collection. Taking everything afore-mentioned into account, it can be concluded that there is still room for more serious and detailed research in the future that will include a larger number of respondents and the aim of which will be to examine the conditions in which classes are attended.

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Apstrakt

Da li se obraćamo zidovima ili prenosimo znanje studentima – Prednosti i nedostaci online učenja

Kristina Bojić, Ivana Brdar, Marija Nešić

U doba digitalizacije, ubrzane COVID-19 pandemijom, postoji stalna potreba za merenjem uspešnosti digitalnog obrazovanja, upoređivanjem i ponovnim procenama pozitivnih i negativnih ishoda, koje zavise od dostupnih tehničkih uslova, kao i od toga u kojoj meri su dosadašnja znanja nastavnika prilagođena praktičnim i tehničkim izazovima. Cilj ovog rada jeste predstavljanje analize prednosti i nedostataka digitalnog obrazovanja iz ugla studenata u kvalitativnom istraživanju, sprovedenom u školskoj 2021/22. godini. Polazna tačka bile su dve hipoteze vezane za pozitivne aspekte i dve hipoteze vezane za negativne aspekte onlajn učenja. Sproveden je dubinski intervju, dobrovoljnog karaktera, među 20 učenika srednjih škola i 20 studenata. Analizom dobijenih rezultata i njihovim upoređivanjem sa podacima dobijenim iz kvantitativnog istraživanja, sprovedenog 2020/21, moguće je uporediti promene koje su se desile i tako steći bolji uvid u ceo proces koji je nesumnjivo pretrpeo određena poboljšanja, ali takođe ostavlja prostor za dalje unapređenje, posebno u smislu motivacije učenika i nastavnika za aktivnim angažovanjem i komunikacijom. Ovo bi moglo da pomogne učenicima da prevaziđu svoje nepoverenje u onlajn obrazovanje.

Ključne reči: *Digitalizacija, obrazovanje, pandemija, onlajn platforme*

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