

APPLICATION OF INFORMATION TECHNOLOGIES IN NEW FORMS OF TEACHING PROCESSES

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Case study

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Abstract: Educating young people is one of the most beautiful and humane vocations. The transfer of knowledge to young people and their introduction into the world of science requires a well-prepared and organized educator. The application of information technologies in education has become an everyday tool, so that its role in the educational process has come to the fore during the last two years. The Covid 19 pandemic brought new challenges to the education system in Republika Srpska. The best solutions for the teaching process were sought. At the beginning, the classes were conducted at a distance, last year in classrooms with classes shortened to 20 minutes, and this year the classes again last 45 minutes, with respect to protection measures. The paper will show how the students coped with all these changes and how much their knowledge of information technology helped them in all this. The research includes an analysis of data collected by a survey of high school students and refers to their attitudes towards the performance of the teaching process in the past few years.

Keywords: education, teaching process, IT.

INTRODUCTION

In just the last few years, the educational process in Republika Srpska has undergone changes that have not been recorded for decades. During the last and the year before last, education has undergone unexpected and sudden changes [1]. Education faced new challenges, which needed to be addressed as soon as possible.

The education of young people did not subside, it continued to take place, only in a different environment [2].

The regular teaching process has always involved meeting teachers and students in one place, at school. But almost half of the school year before last, students from all primary and secondary schools in Republika Srpska learned at a distance. The Covid 19 pandemic seems to have come to change both human mobility, habits and consciousness, and the foundation of society - education. The decisions and measures taken after that, before the start of the pandemic, were unthinkable. Last school year, school classes were more than halved and lasted

only 20 minutes. In the new situation, both students and teachers managed. Who did better?

This school year began with a duration of 45 minutes, with respect for measures to protect everyone in the educational process [3]. According to the research, which was conducted among the students of the third grade of the secondary technical school, the students believe that the class lasts too long. It does not hold their attention, their concentration decreases, they think that they do not need so much time to acquire new knowledge - these are just some of the answers of students. Is it something else after all?

Are our students losing their work habits? Have the previous two school years, realized in difficult conditions, with shortened classes or in the form of online teaching, already introduced disorders in education that we will become aware of only later. Perhaps completely new norms of education are arriving: the duration of classes, the form of work, the method of teaching. We are perhaps in the greatest transition of the educational process ever.

ADAPTING EDUCATION TO SUDDEN CHANGES

The education system of a country shows its current state and society's attitude towards the young generation. Organizing and performing the educational process is a very complex and demanding job [4]. It is the foundation of creating a new society, leadershiping and guiding young people towards new changes and challenges. The process of education is constantly changing and improving [5]. Teachers know that the ways in which students learn new content affect the quality and durability of their knowledge [6]. The application of information technologies in new forms of teaching processes is inevitable, no matter how they are performed today.

The Covid 19 pandemic, in early March last year, was the cause of sudden, forced changes in the education system. In a period of just over a year and a half, during the pandemic, the teaching process went through three school years. The year before last school year, at the beginning of the second semester, due to the Covid 19 pandemic, classes were immediately relocated from classrooms and realized at a distance. Last school year, students were returned to the classrooms, but classes were held with shortened classes. Schools were obliged, in order to protect students, to organize classes in smaller groups of students. In most schools, students in the class were divided into two groups, so classes were shortened from 45 to 20 minutes. This school year, classes are held again in classrooms, with classes of 45 minutes [7]. Due to the still present pandemic, the protection measures that the Institute for Public Health of the Republic of Srpska sent to all schools are respected.

Regular changes in the education system include analysis of the situation, detailed preparations and implementation of appropriate measures to eliminate possible shortcomings.

Changes in the way the teaching process has been carried out in the last few years have not had time for preparations, by no means for those that are systematic and comprehensive. They were coming quickly and they also needed to be resolved quickly. The most important thing was not to interrupt the teaching process and to realize the school year.

Teachers and students seemed to come together to overcome obstacles, caused by sudden changes.

The year before last, they tried to improve their computer literacy at the same time. Not in the classroom, but in their homes, students waited for class, learning about the importance of applying information technology, not only for fun, but also to improve their own education. On the other hand, teachers prepared and sent material to students every day and for several hours, examined them, received assignments, control, seminar and graduation papers....

When they somehow managed to master it all, the classes were returned to the classrooms. Classes were shortened, there was twice less time left to work in the classroom than before. New challenges awaited students and teachers again. And no matter how impossible it seemed, the content of the lesson planned for 45 minutes had to be realized in 20 minutes. And that is where the students and teachers managed themselves again. Of course, there had to be a supplement to the appropriate elements of knowledge, even after class. Information technologies have become an instrument of complement and link of the new age between teachers and students.

RESEARCH ON THE SIGNIFICANCE OF IT APPLICATION IN TEACHING

The paper includes research on students' attitudes towards different ways of teaching: regular, with a duration of 45 minutes; teaching with classes shortened to 20 minutes and classes conducted at a distance. In just two school years, students had the opportunity to participate in all three forms of teaching.

The research included third grade students of secondary vocational school. Most of them will reach the age of majority this year, so they can be considered responsible when filling out the questionnaires. The students answered the six questions anonymously. The questions related to the teaching process, which they had been going through since the beginning of the Covid 19 pandemic.

The research included questions related to the collection of data on the quality and representation of the teaching process conducted at a distance and with reduced hours, their comparison with traditional teaching; comparing the success that students have achieved in different forms of teaching,

the shortcomings of certain forms of teaching and the problems they encountered during any form of teaching process.

The data collected from the students and their expressed opinions point to new facts, attitudes of young people and changes that may follow in the very near future.

ANALYSIS OF COLLECTED DATA

The analysis of the collected data can show the attitude of young people towards education. Did the irregularity of attending classes and shortened classes affect that, but the fact is that the collected data show that young people generally do not want teaching to take place with classes of 45 minutes. The most common reason was that they lose concentration in the second part of the class, they cannot be focused on the teaching content and their attention decreases.

When asked if they were satisfied with the ways of conducting online and abbreviated classes, the majority of students answered positively (95%). Only 5% of students stated that they were not satisfied, without giving reasons.

When asked, with which form of teaching they achieved the best success in school, only three students answered that they achieved the same success, regardless of the way of teaching. Other students gave different answers.

The results of the research on student achievement can be presented using diagrams (Figure 1).

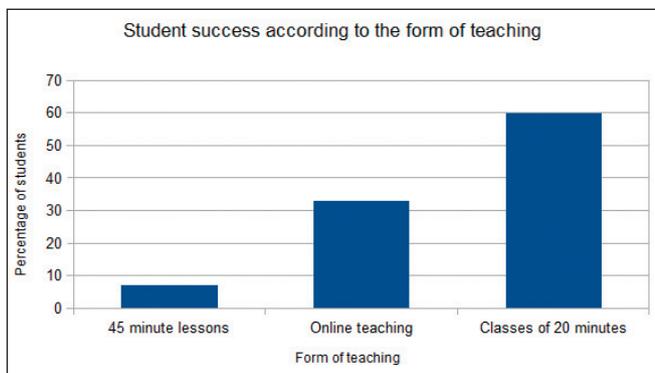


Figure 1. Students' opinions on the achieved success according to the form of teaching

The diagram shows that the largest number of students stated that they achieved the best results last year, with classes of 20 minutes (60%). One

third of students (33%) said that they achieved the best success during online classes and 7% of students said that this success was achieved during traditional classes of 45 minutes.

The students gave similar answers to the question, which form of teaching would they choose for this and the next school year, if they had a choice. More than four-fifths of students voted to come to school, but with shortened classes (81%), only 5% of students would choose teaching with 45-minute classes and 14% of students declared for online classes.

Comparing the previous answers, it can be noticed that one third of the students stated that they achieved the best success during online classes, but a significantly smaller number of them stated that they would like to continue this form of teaching. This shows that students still want to come to school. And in the oral conversation with the students, most of them state that they prefer attending classes at school and spending time with their classmates every day. However, either orally or through a survey, the majority of students say that classes should be shortened. When asked how realistic one school lesson should last, in order to be able to adopt all the new elements of knowledge, the students gave, perhaps unexpected answers (Figure 2).

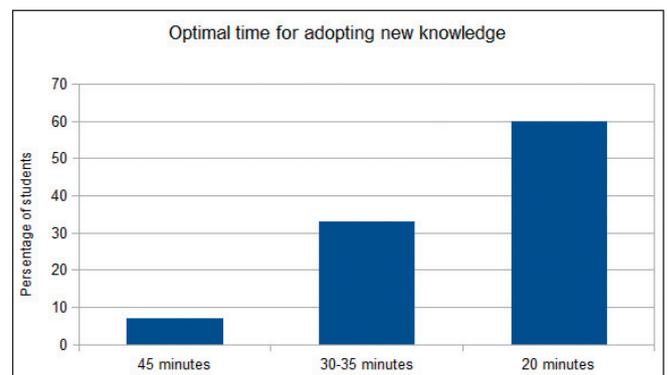


Figure 2. Students' opinion on the most favorable time for school hours

The diagram shows that most students believe that the optimal class time is between 30 and 35 minutes. When asked to state the reasons for shortening classes, they said that they thought that was enough to acquire new knowledge. Efficiency and effectiveness can be achieved during this time, with the appropriate organization of the class, the most

common are the comments of students. In the end, the students stated about the problems during the online classes or teaching with abbreviated classes. Students generally had no problems with any form of teaching (88%). Students who faced a problem during the implementation of the teaching process (12%), as the reason stated the inability to send materials, poor connection, weak signal on the network and the like.

THE ROLE OF SCHOOL IN YOUTH EDUCATION

According to the results of the research, students prefer to come to school, rather than learning at a distance. Most believe that the best results in learning are achieved by learning in the classroom. It is easier for them to follow the teaching contents, ask for explanations in case of misunderstandings or doubts, and finally, socialize with each other [8]. One student expressed himself very nicely, yet we are so young and eager to socialize.

The role of the school in the education of the younger generations is irreplaceable. It has always been a place of education but also of upbringing young people. Education is somehow self-evident, but special attention should be paid to upbringing, especially today.

Students sometimes need only warm conversation and expression of understanding in order to achieve better success and increased responsibility.

And while the Covid 19 pandemic lasts, during which teachers and students are exposed to constant challenges, it is good to meet at school. They learned to use modern information technologies in the realization and improvement of the teaching process. They met with a completely new way of organizing and conducting classes. Now, just over a year after the declaration of the pandemic that is still going on, they have been returned to the original form of the teaching process, for 45 minutes. And while educators look forward to 45-minute classes, students generally want a shortened form of classes.

CONCLUSION

Students and teachers have faced the challenges that have been imposed on education in the last two years. Since the beginning of the Covid 19 pandem-

ic, the teaching process has gone through several forms. Distance teaching, classes shortened to 20 minutes, sending materials using modern IT tools, all these were new requirements.

Students and teachers went through it together. Maybe not quite the best, as it was wanted, but the teaching process did not suffer and managed to be realized.

Adapting the educational process to the difficult conditions of teaching implies its rationalization. Different forms of learning were used: e-learning at a distance, completely new platforms, the application of a virtual classroom and multimedia. The application of IT enables the realization and modernization of teaching content, and sometimes it is the only link between students and teachers.

After the changes, by returning the lessons to 45 minutes, it is noticed that the irregularity of the teaching process has left its mark. Research shows that, unlike teachers, most students are reluctant to accept a 45-minute class and prefer to shorten school hours.

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