Application of Electronic Learning in the Educational Education Work of the Classroom Teaching and Teaching

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Abstract - **Modern technologies provide advanced knowledge and prepare students for lifelong learning. They affect both education and upbringing. Electronic learning is now inevitable. The main goal is to create a modern school through information technology, and to abandon the current traditional way of working. Electronic learning offers many learning advantages where we will point out some of its most important features in the paper, and we will give guidance on how to apply it through several tasks related to the attitudes and opinions of teachers and students about its use, better results, more motivation for learning and similar. We have come up with a result where students and teachers advocate learning through information technology in classroom teaching and want to apply them in their work.**

Keywords- **Electronic learning, new models of learning, new technologies.**

1. Introduction

We can consider the teaching as a social as well as a historical category that is conditioned. It is a complex process and organized in a planned way, where students acquire knowledge, acquire skills and habits, and develop psycho-physically and educationally [16]. Teaching played a very important role in the oldest civilizations. Thus in ancient Greece there was a developed school system, and in ancient Rome it was a system of basic grammar and rhetorical school. Capitalist societies demanded an educational workforce. Thus, new forms of teaching were created that enabled a greater number of individuals' education. Various reform movements in schools and classes have introduced new didactic learning systems. It should be emphasized that traditional teaching is characterized by a frontal form of work and usually one-way communication between teachers and students. Students are insufficiently activated in their work and unable to progress individually according to their knowledge and abilities, which affects students' motivation. The quality of the work of the traditional school can not sufficiently satisfy the needs of a modern society. The modern society requires an individual to collect information independently, to manage them, analyze them and transform into usable knowledge. The modern school will provide the opportunity for individual development of each student. With the help of information communication technologies, students will not be just an object of instruction, but will become subjects.

2. Modern classes of teaching and education

We recall that the changes that are happening in society due to scientific, economic and technological progress are conditioned by changes in teaching and the teaching process. Teaching is thus conditioned and depends on the socio-historical circumstances in which it is performed. The goals, tasks and contents of educational work in contemporary society are

different in relation to society from the earlier epochs. Thus, for example, the goals and tasks of teaching are not the same in the 21st century as in the 19th century. The basic teaching factors are the teacher who teaches, the learner who learns and the content to be mastered.

Classroom teaching is a complex process, which must be organized and managed in a planned manner, in which students must adopt certain skills, acquire skills and habits, properly develop psycho-physically and universally educate themselves. The leader of the entire process is a teacher, who is professionally, didactically-methodically and psychologically prepared for achieving all the tasks and goals of teaching [15]. Based on the main characteristics it can be stated that teaching implies an educational process based on socially determined goals and tasks that are achieved in didactically-designed contents. Teaching is essentially a planned educational process, that is, it is also a process activity that is not limited to one day, week or a month, but lasts longer [10]. It is widely known that teaching is considered one of the oldest human activities. It appeared and played a very important role in the oldest civilizations, Athens, Rome, Sparta, Egypt, etc. Athens as a state had a very developed science, economy and art. On this basis, it developed a teaching course in which young people from the seventh to the twentieth year were educated. Education was divided into four levels. The first level was called the guitar grammar school, which was attended by children from the seventh to the thirteenth. In this school, students were taught to read, write, calculate and play. She was preparing young people to continue their education at higher levels. Palestra was a second-level school of education that lasted two years with the main task of helping a young man in physical development,

Today, this is quite different when we are talking about a modern school. The modern school has clearly defined content and learning goals that are easier and faster to accomplish, than in the case of earlier learning and education. A contemporary learner is provided with a different new education that is much more interesting and effective.

The representatives of the new school were very radical in criticizing the old school [15]. By their criticism they contributed to the better development of didactic theory, and the teaching practice itself. However, the results of the reforms they took did not bring high results. The reason for this is that they went to extremes in their ideas as well as the followers of the old school. The biggest mistakes were made in terms of non-application of the principles of logic, systematic and causative-consequence of the content. The next mistake was that the role of teachers was marginalized for pupil

self-activity. Another mistake was that they denied the need for minimum common and unique content of the curriculum, but the programs were created according to the needs of each student. The only good side of the new school at the time is the contribution to the analysis of the situation and the understanding of the weakness of the old school, as well as the need to reform the existing way of learning, with which we have come to the contemporary school and its education system. Contemporary school is a topic and subject of research by many authors of this field, which has not been given much attention so far. The traditional model of teaching is a model in which the teacher, together with his students, has not had the opportunity to acquire his knowledge through various multidisciplinary and multidimensional sources of information, as is the case now.

It is already high time for someone to point to the goal, which primarily relates to the proposal of transforming classical teaching into modern school through the introduction of teaching innovations and information and communication technologies, such as various innovative models of teaching, different modes of work, planning, monitoring and evaluation , and based on this, the vision of a modern school and a universal society in general is created gradually. This should also add to the importance of the media that support today's learning. The Internet greatly facilitates easier and faster learning, and advancement.

Deming says: The school system should be part of the educational system in which children and students enjoy learning, free from fear of grade and punishment, in which teachers enjoy their work, free of fear of assessment [4].

It is necessary to emphasize that our school, in order to be contemporary, should reject the current methods of work, methods and techniques in its entirety, and to apply information technology in its work.

A quality modern school is the school where all subjects meet their needs. In this school, failure and compulsion are not known, and because of this, the students are ready to make a great effort for their education, which will contribute to them both in life and in work. Pupils, teachers and parents are in constant contact, and communicate to the maximum. In order to attract attention to modern school, one needs to emphasize another important point, which can be the use of responsive teaching. Characteristics of responsive teaching can also be seen from the aspect of the cognitive structural theory of the American psychopedagoguical school, by Jerome Bruner. He opposed the behavioral explanation of the development of man and emphasized that intellectual development is characterized by the increasing independence of the reaction from the immediate dread, stimulus. It is widely known how intellectual

competences are of great importance for the entire educational system. Much of the development is that man is able not to react to stimuli automatically, but to discover what is important, changeable and immutable in them, and to make decisions on how to react [7]. Bruner believes that intellectual development depends on interaction between pupils and teachers. The basic medium of instruction is the language. Teaching should play a decisive role in the intellectual development of students, and this is only possible if the didactic parallelism and the integrity of active, visual and symbolic representation are established [2]. Responsible teaching is a model of contemporary teaching. The pupil and the teacher are responsible for participating in a democratic election and achieving important didactic-methodical activities for preparing, implementing and evaluating the teaching [6].

To conclude, the Contemporary School definitely has a different view of teaching, where teachers are builders of their work and advancement, and the students together with teachers bearers of all activities, which corresponds to responsive teaching which aims to unite teachers and pupils. Also, with the use of animations, children with special needs for work can also be interested. Animation as a multimedia tool is at the forefront of the visualization systems [13, 14]. Developments in computer technology contribute to the development of instructional plans to enable students to learn in a variety of ways [12]. Animation is a technical process that, in general, produces motion illusion in the viewer by sequencing the still images produced in the analogue or digital environment in sequence. As a way of producing a film as much as it is technically possible, the development of the animation, which is included in the genre film itself, can now go beyond the judgment that it is mainly an entertainment for the mass audience of children [9].

The realization of 3D animated films appealing to people of all ages has been influential in bringing the concept of animation out of the audience perception of traditional animation films by giving them brand new dimensions [3].

3. Electronic learning and teaching

Electronic learning is one of the most used synergies in the process of modernizing education in the world. Various definitions of electronic learning are used. Electronic learning has been in operation for more than a decade as a learning experience facilitated and enhanced by the use of information and communication technology. Such devices at this technological moment include a computer with additional devices, digital television, portable and pocket computers and mobile phones. Communication enables the use of the Internet, e-

mail, discussion groups, and collaborative learning systems [5]. This learning essentially involves distance learning, and can be considered as a component of flexible learning. When learning is done exclusively over the network, then it is called online learning. When learning is distributed to mobile devices such as mobile phones, portable and pocket computers, then learning is called m-learning. Mobile learning (m-learning) and on-line learning are two subsets of e-learning. All three of these sets belong to distance learning. In formal terms, e-learning involves a number of learning strategies and technologies that support the learning process, such as CD-ROMs and media, then computer-based, videoconferencing, learning content delivered with satellite communications and education networks. Through them, an individual exchange of information and acquiring knowledge of those involved in such a process is carried out. It can be said that this learning is based on electronic technology, and thus it is designed to enable the acquisition of knowledge and skills not only of students in the formal process of learning and teaching, but also for all categories of users in the so-called process of lifelong learning [5]. E-learning is a very important determinant in today's way of learning and education. Some eLearning leaders believe that it represents a new pedagogical branch that redefines the theory and practice of teaching and learning. This is why an increasingly imperative demand is placed on students and teachers to prepare for life and work in a new multimedia environment. Multimedia teaching involves the presentation of an integrated set of several different media (text, images, sound, film) in order to more effectively achieve the goals and tasks of the curriculum [11].

In order for a teacher to realize this kind of teaching, he must complete his competencies in the use of information technologies in the process of preparing and conducting teaching and learning. The basic competencies are the skills and abilities of using computers. This includes some of the following knowledge and skills:

- Knowledge of different computer programs and tools;
- Possess basic knowledge of information technologies as a set of various tools and techniques;
- Understanding the role and possibilities of applying information technologies in the process of teaching and learning;
- Knowledge of ethical principles in interactive use;
- Information management;
- Use of computers and all technical devices;

- Use of Internet as a source of information and participation in their exchange;
- Critical assessment of the value of information;
- Interest in the use of information technology, etc. [11].

In the field of education, the new network environment raises the question of how to improve educational education, which is relatively expensive, especially for our socio-economic opportunities. The possibilities of teaching in a new network environment and the importance that ICTs have in the teaching process undoubtedly are enormous, primarily using simulations, applets and individualizations of teaching through applets and e-learning systems [8]. Forums and discussions provide interaction between all participants in the teaching process (teachers and pupils) either through asynchronous communication (discussion forum) or in real time (discussion, chat). Discussion forums are especially important in introducing certain aspects of e-learning, because they enable communication in which each participant chooses time (during a working day, week, etc.), which is most suited to participation in knowledge sharing. The system of creating tests and quizzes is interesting because the assessment is done immediately, upon the completion of the test. In this way both teachers and students have a clear insight into the results achieved [1].

4. Methodology and results

The research was conducted as a cooperative (applied) research, using different research methods (method of theoretical analysis, descriptive method, causal method and the Servei method). The research also used a variety of techniques (surveying, scaling, testing, interviewing). The survey was conducted in elementary schools in the RS, as well as in elementary schools in the FBiH, primary schools of Brcko District. The research involved a total of 12 primary schools. The students' attitudes and opinions on the introduction and application of e-learning in classroom teaching were examined and continued in a whole series of tasks related to computer work, Internet, electronic materials, etc., where we obtained the following results, some of which were presented in this work.

Table 1. Do you use computers at school other than IT classes?

Elementary school	Yes		No	
	N	%	N	%
19.april	18	90.0	2	10.0
Desanka Maksimovic	74	90.2	8	9.8
Second elementary school	36	80.0	9	20.0
Goran Ivan Kovacic	22	91.7	2	8.3
Ivan Filipovic	34	94.4	2	5.6
Lijesce	57	96.6	2	3.4
Mesa Selimovic	27	58.7	19	41.3
Musa Cazim Catic	29	76.3	9	23.7
Fifth elementary school	36	90.0	4	10.0
Skender Kulenovic	15	100.0		
Stjepan Radic	28	77.8	8	22.2
Sveti Sava	93	94.9	5	5.1

Out of the total number of students, most respondents, or 87.0% of them, do not use computers at school other than IT classes.

Table 2. How much does using your computer in teaching make learning easier?

Elementary school	Not enough		Enough		Medium		Very good		Excellent	
	N	%	N	%	N	%	N	%	N	%
19.april	7	35.0	3	15.0	4	20.0	1	5.0	5	25.0
Desanka Maksimovic	28	34.1	6	7.3	34	41.5	6	7.3	8	9.8
Second elementary school			6	13.3	5	11.1	11	24.4	23	51.1
Goran Ivan Kovacic	2	8.3			10	41.7	10	41.7	2	8.3
Ivan Filipovic	4	11.1			9	25.0	14	38.9	9	25.0
Lijesce	3	5.1	14	23.7	21	35.6	17	28.8	4	6.8

Mesa Selimovic	4	8.7	3	6.5	15	32.6	15	32.6	9	19.6
Musa Cazim CatiC	1	2.6	1	2.6	14	36.8	11	28.9	11	28.9
Fifth elementary school	3	7.5	1	2.5	10	25.0	15	37.5	11	27.5
Skender Kulenovic	1	6.7			6	40.0	5	33.3	3	20.0
Stjepan Radic	1	2.8	4	11.1	8	22.2	9	25.0	14	38.9
Sveti Sava	10	10.2	13	13.3	26	26.5	29	29.6	20	20.4

Half of the respondents, or 48.5%, gave the assessment very good or excellent for learning by computer with facilities.

Table 3. How much does the Internet provide information to you as learning aid?

Elementary school	Not enough		Enough		Medium		Very good		Excellent	
	N	%	N	%	N	%	N	%	N	%
19.april	1	5.0	9	45.0	3	15.0	4	20.0	3	15.0
Desanka Maksimovic	1	1.2	10	12.2	14	17.1	29	35.4	28	34.1
Second elementary school	1	2.2	1	2.2	8	17.8	14	31.1	21	46.7
Goran Ivan Kovacic			3	12.5	7	29.2	10	41.7	4	16.7
Ivan Filipovic	1	2.8	2	5.6	6	16.7	10	27.8	17	47.2
Lijesce			4	6.8	26	44.1	14	23.7	15	25.4
Mesa Selimovic	2	4.3	2	4.3	4	8.7	18	39.1	20	43.5
Musa Cazim Catic			3	7.9	5	13.2	13	34.2	17	44.7
Fifth elementary school	1	2.5	5	12.5	5	12.5	15	37.5	14	35.0
Skender Kulenovic	1	6.7	2	13.3	1	6.7	2	13.3	9	60.0
Stjepan Radic	1	2.8			6	16.7	13	36.1	16	44.4
Sveti Sava	7	7.1	3	3.1	13	13.3	39	39.8	36	36.7

Most respondents (70.7%) rated the Internet excellent or very good information as a learning aid, 18.2% gave them a medium grade score, while 11.2% of the respondents rated it insufficiently or sufficiently.

Table 4. How much can the Internet replace a classical tutorial?

Elementary school	Not enough		Enough		Medium		Very goog		Excellent	
	N	%	N	%	N	%	N	%	N	%
19.april	5	25.0	6	30.0	6	30.0	2	10.0	1	5.0
Desanka Maksimovic	5	6.1	20	24.4	24	29.3	16	19.5	17	20.7
Second elementary school	1	2.2	5	11.1	17	37.8	11	24.4	11	24.4
Goran Ivan Kovacic	3	12.5	2	8.3	8	33.3	6	25.0	5	20.8
Ivan Filipovic	2	5.6	2	5.6	13	36.1	12	33.3	7	19.4
Lijesce	3	5.1	17	28.8	18	30.5	13	22.0	8	13.6
Mesa Selimovic	4	8.7	5	10.9	16	34.8	13	28.3	8	17.4
Musa Cazim Catic	1	2.6	5	13.2	13	34.2	12	31.6	7	18.4
Fifth elementary school	4	10.0	8	20.0	8	20.0	8	20.0	12	30.0
Skender Kulenovic			1	6.7	7	46.7	3	20.0	4	26.7
Stjepan Radic	6	16.7	5	13.9	6	16.7	5	13.9	14	38.9
Sveti Sava	9	9.2	20	20.4	19	19.4	32	32.7	18	18.4

One quarter of respondents (25.8%) estimated that the Internet could replace the classical textbook insufficiently or sufficiently, 28.8% gave them a medium grade score, while close to half of the respondents or 45.5% rated it very good or excellent.

Table 5. How much easier it would be to check the knowledge with the computer?

Elementary school	Not enough		Enough		Medium		Very good		Excellent	
	N	%	N	%	N	%	N	%	N	%
19.april			6	30.0	7	35.0	4	20.0	3	15.0
Desanka Maksimović	5	6.1	8	9.8	14	17.1	29	35.4	26	31.7
Druga osnovna škola	1	2.2	3	6.7	6	13.3	13	28.9	22	48.9
Goran Ivan Kovačić	1	4.2	3	12.5	4	16.7	14	58.3	2	8.3
Ivan Filipović	1	2.8	2	5.6	7	19.4	6	16.7	20	55.6
Liješće	4	6.8	10	16.9	17	28.8	15	25.4	13	22.0
Meša Selimović	4	8.7	3	6.5	11	23.9	12	26.1	16	34.8
Musa Ćazim Ćatić	3	7.9	3	7.9	12	31.6	6	15.8	14	36.8
Peta osnovna škola	2	5.0	1	2.5	6	15.0	7	17.5	24	60.0
Skender Kulenović			1	6.7	5	33.3	3	20.0	6	40.0
Stjepan Radić			2	5.6	6	16.7	5	13.9	23	63.9
Sveti Sava	11	11.2	10	10.2	21	21.4	15	15.3	41	41.8

Most respondents (62.9%) rated them with excellent or very good computer skills.

5. Conclusions

The research wanted to achieve the next goal, and this was to suggest a modern model of learning and organization of work in schools with the help of information technology. This was to prove that modern technologies can create a revolutionary change in education and its further development. We can conclude that students are advocating for modern teaching that will enable them to better learn easier and faster access to information, more precisely getting feedback. Most students advocate learning through the Internet, that is, through electronic learning, where they say that it is in good measure replacing the classical way of learning. Current contemporary societies are based on the creation of knowledge that allows you to find the information you need to solve a particular task. With this in mind, there must also be schools that will be the leaders of new ideas, new knowledge and new abilities. By introducing new methods and forms of work with the help of information technology, that is, e-learning, a vision of a modern school is created, which enables a better, more efficient and effective teaching of the entire teaching system.

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