



The Use of Computers in the Teaching-learning Process Some Time Ago and Nowadays

Marija Markov *

51 Partizanska Street, Radovish, 2420, Republic of North Macedonia, teacher in elementary school, Kosta

Racin, Podareshe, Radovish

Email: marijaspasova989@yahoo.com

Abstract

Information and Communication Technology's development and the gradual implementation of computers as a teaching aid in educational institutions impose the need for additional instructions for classroom teachers regarding the computers' use while working with children. Both the computer and its use in the teaching-learning process offer numerous opportunities, but it is important to choose those opportunities that will improve the educational process with the computer's proper use and will motivate students to acquire new teaching content.

Keywords: digitalization; education; Informatics; computers; teaching process.

1. Introduction

Information and Communication Technology's development has brought big changes in practically all aspects of human existence in the 21st century, including both the teaching methods and the teaching process in schools. Traditional teaching has begun to be more and more replaced by teaching that is rich in various multimedia contents and which offers new opportunities in education.

Received: 1/30/2024

Accepted: 3/12/2025

Published: 3/28/2025

* Corresponding author.

In the 80s and 90s, it could have already been predicted that the computer would have become a helpful teaching aid, it would be easily learned by using games, and that with the assistance of various contents and educational games, there would be discovered a lot of opportunities stimulating imagination and creativity development and logical thinking and reasoning and would move in a direction of developing digital competencies. Nevertheless, how much these games really help the child's development is an interest of many scientists from different fields of science. Social justification means an attachment to scientific justification. The research would help not only the expert but also the general public to become acquainted with the advantages and disadvantages of introducing digitalization in the educational system.

2. Influence of technology

Innovations in the educational systems, i.e., the acceptance of new services and technologies, as well as the competencies' development in educational institutions, can contribute to studying results' improvement and equity and efficiency increase in educational systems. It is considered that the innovations will be the most effective and sustainable when they are accepted by well-trained teachers and when they are a part of explicit teaching objectives. Additionally, it is thought that it should be done more in order to achieve the best use of digital resources for educational goals. The listed goals point to the need for researching ICT use in schools and factors contributing to successful ICT integration in the teaching process, including those factors being the biggest obstacles to using ICT in both the learning and teaching process. It is important to emphasize that digital learning provides an opportunity for self-regulated, independent, and collaborative studying, which is in agreement with the requirements of constructivist pedagogy that modern schools strive for. Technology has affected practically every aspect of human existence today, and education is not an exception. In a way, the education looks the same as it used to years ago. Nowadays, classrooms do not look much different, but technology has definitely changed the way of teaching performance. Namely, technology has significantly broadened access to education. In medieval times, books were rare, and only a few of the elite had access to educational opportunities. Some individuals had to travel to teaching centers to obtain education. Nowadays, large quantities of information (books, audios, photographs, and videos) are within arm's reach through the Internet, whereas possibilities for formal learning are available on the Internet worldwide in different forms such as podcasts, traditional online diploma programs, and much more. Today, access to learning opportunities is without precedent in scope thanks to technology. Communication and collaboration opportunities have also been broadened by technology. Traditionally, classrooms are relatively isolated, whereas cooperation among other students in the same classroom or building is restricted. Nowadays, technology enables forms of communication and cooperation that people could not even dream of in the past. Students can share the things they learn with students in other classrooms in other countries following the same expedition. Students can collaborate on group projects using tools based on technology such as Wikipedia and Google documents. Classrooms' walls are no longer barriers since technology provides an opportunity for new ways of learning, communication, and cooperation. Technology has also started changing teachers' and students' roles. In a traditional classroom, the teacher is a primary source of information, and the students receive it in passively. This teacher's model as "a wise man at the scene" has been present for a long time in education, and nowadays it is highly involved too.

Nevertheless, due to the access to information and the opportunities technology has provided, nowadays in many classrooms, we see that the teacher's role transforms into "a guide on the side" since the students undertake a greater responsibility for their learning by using technology for collecting relevant information. Schools and universities throughout the entire country have started redesigning the rooms for learning to enable this new model of education, enhance greater interaction and work in small groups, and use technology as a facilitator. To realize how technology affects education nowadays, first, it has to be understood in the broad context of the influence of technology's development on different society segments, especially on the educational process. The modern lifestyle and technology development change both our way of living and working [8]. Technology is a powerful tool that can support and transform education in many ways, from helping teachers create teaching materials to providing new ways for people to study and work together. Along with the global reach of the Internet and the omnipresence of smart devices that can connect to it, a new era of education comes up anytime and anywhere. The designers of the teaching process and educational technologies shall maximally use the opportunities the technology provides for changing education, thus making effective and efficient education available for everyone everywhere.

3. Computers in schools during pandemic

When schools got closed during the COVID-19 pandemic and students relied on distance learning, racial and socio-economic differences broadened. Even one year after the pandemic, children fell behind because of unsteady access to computers, bad home Internet connections, and lack of direct teachers' instructions. When it comes to distance learning, it is inevitable to state that distance learning, which nowadays shapes itself as online learning, presents a new work in our environment, and it has advantages in comparison to classical classroom teaching. Technology's development level enables each individual to follow the teaching program and broaden his or her knowledge. The number of empirical findings points to certain advantages in distance learning, and some of them are the following ones: The classroom is a place where the Internet is, meaning that the classroom is mobile, i.e., if there is Internet, then there is teaching too. In terms of the atmosphere, it is relaxing, but regardless of the numerous advantages and naming it as the future of the teaching process, nothing can replace the conversations being led face to face. It is recommendable to see online teaching as a concept of your favorite music group. When you listen to it on YouTube, it is good, but the feeling of a concert live is completely different, and it cannot be replaced in any other way [9].

4. Conclusion

It is impossible to imagine the 21st-century educational system without using computers. Computers are a constituent part of modern life, and they will occupy, to a great extent, all aspects of life, from industry to education. There are a lot of types of computers, and as such, they provide greater aspects for teaching progress. By applying technological achievements, education can reach a completely innovative and improved school system. The use of technology or computers in the teaching process is compatible with all subjects, not only in the primary but also in the secondary education. The use of technologies in education can be seen not only in higher education institutions but also in secondary and primary schools. Technology is regarded as an important tool in today's world, where most work positions, such as business, education, and networking, are performed

with the help of technological devices. Modern technology and education have considerably changed in the last twenty years. Technological development is one of the main reasons why education has gone through so many changes. In today's society, the influence of technology on education has played a crucial role in every domain of everyday life, and that is why education is not an exception. Both the digital form of textbooks and multimedia encourage students' independent work, and at the same time, they develop their ability to think. By using computers, monotony in the teaching process, which was practiced up to fifteen years ago, has almost completely disappeared.

References

- [1] Arsenovski S., Loshanska T.M., Kakashevski Gj. (2009) Informatics (a textbook for fifth grade of the nine- year primary education), Ministry of Education and Science of the Republic of Macedonia;
- [2] Cackov K., Sivevska D. (2012) "Computer in methods of teaching nature and society-indispensable factor for the development of individual thought, inventiveness and creativity, Faculty of Educational Sciences, University "Goce Delchev", Shtip;
- [3] Fortnow, L. (2021). Fifty years of P vs. NP and the possibility of the impossible. Communications of the ACM, 65, 76–85;
- [4] Ghasemi B.(2011) "The capabilities of computers for language learning", available at <https://www.sciencedirect.com/science/article/pii/S1877042811024517> (accessed on 19.10.2024);
- [5] Hall C., Lundin M. (2024) "Technology in the classroom: Personal computers and learning outcomes in primary school", Institute for Evaluation of Labor Market and Education Policy (IFAU), PO Box 513, SE-751 20 Uppsala, Sweden;
- [6] Isaacson W. (2011) „Steve Jobs”, New York;
- [7] Ilić S. (2020) "Use of information technologies in teaching – attitudes and opinions of teachers and students", Novi Sad;
- [8] Miraschieva S., Petrova Gjorgjeva E., Stavreva Veselinovska S. (2015) "Education through the prism of future perspectives and development", UDK 37.01-027.12, Faculty of Educational Sciences, University "Goce Delchev", Shtip;
- [9] Miraschieva, S. (2020) Didactic aspects in distance teaching. Education - Journal of educational sciences, theory and practice. ISSN 1857-8705;
- [10] Preparation of a long-term ICT national strategy 2020-2025, Republic of North Macedonia; National ICT strategy 2021-2025, available at <http://mrk.mk/wp-content/uploads/2018/10/Strategija-za-obrazovanie-ENG- WEB-1.pdf> (accessed on 20.10.2024);
- [11] Zhivanovikj R. (2010) "The use of computers and Internet in the educational system of R.M.", Skopj