

THE IMPACT OF TECHNOLOGY ON EDUCATION

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Abstract:

Technologies can change the way we learn and teach. And they play an important role in further improving the education system. They help make the education system more interactive, efficient and modern. As the founder of Microsoft Bill Gates said, "Technology will not replace great teachers, but technology in the hands of great teachers can be transformational". According to him, technology enhances the quality of education and provides teachers with opportunities to teach in a modern way. Undoubtedly, a bright future cannot be imagined without modern technologies, and they have the power to change our lives for the better. This article explores impact of technology on education and highlighting its improvements.

Key words: the development of television programs, EdTech, online learning, educational apps, Artificial Intelligence (AI).

Introduction:

The 21st century is considered the age of technology. The demand for using technology is increasing day by day. On this basis, educational technologies have developed over the last decade, fundamentally transforming the education system. Lessons are no longer limited to books and blackboards, nowadays, great emphasis is placed on teaching based on modern technologies. As of today, education has reached the level where Artificial intelligence and online learning platforms are used for teaching.

The historical development of educational technologies dates back to the late 19th century BC when books and writing boards were the primary teaching tools. These tools were a specific method of convenient learning for their time. Later, the invention of printing machines advanced, allowing books to be distributed to the public quickly and efficiently. Technological progress and the emergence of teaching aids correspond to the 20th century. To enhance people's interest in gaining knowledge, radio-based lessons began in the 1920s. Between the 1950s and 1970s, television lessons emerged as an innovative advancement in the education system. Educational television programs were first tested in the United States and Europe in the 1950s. In 1951, Ball State University in the state of Indiana introduced the first television lessons. Lessons were recorded in television studios and broadcast live. In this process, teachers used blackboards, diagrams and other visual materials. Following this, official television programs started to be introduced in many countries. This process became the foundation for modern educational platforms, leading to the development of the EdTech (Education Technology) sector.

EdTech helps to develop the learning process and increase its efficiency by integrating modern technologies into education. EdTech includes distance learning, artificial intelligence, gamification, smart boards, real-time assessment, and student activity monitoring system. EdTech, in turn has a positive impact on education. In particular, it provides opportunities for students in remote areas to receive quality education, allows students to learn any time and anywhere, and enables the selection of programs that match each student's level of knowledge. Founder of Khan Academy Salman Khan said: "Technology create the opportunity for anyone to learn, anywhere, at any time." These technologies are increasingly becoming an integral part of education year by year.

In the 1990s, the Internet entered the education system, leading to the emergence of the first distance learning system. During those years, online courses and teaching via email began. In 1995, Jones International University became the world's first online university as an experiment. By 2020, distance learning had rapidly developed. The main reason for this was the global spread of COVID-19. As a result, schools and universities worldwide were forced to switch the online education. According to UNESCO, by March 2020, more than 1,5 billion students in over 190 countries were cut off from traditional education. Consequently, educational technologies and platforms began to be widely used. Including MOOC (Massive Open Online Courses) such as Coursera and edX, which offer free courses. Educational platforms like Udemy and Khan Academy have also developed significantly. Video conferencing platforms such as Zoom, Microsoft Teams and Google Meet have been used to conduct online lessons. As a result, online education platforms have also rapidly advanced.

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These educational platforms include various applications, such as: 1) Duolingo- an interactive game-based app that teaches various languages. 2) Babbel- focuses on conversational skills, helping learners improve their speaking abilities. 3) Khan Academy- provides free courses in mathematics and economics. 4) Coursera- offers university-level courses and certifications. 5) STEM platforms include applications like Photomath and GeoGebra, which allow users to solve mathematical problems using images. Additionally, children's education has not been overlooked. ABCmouse is an interactive learning platform designed for children aged 2-8. These types of applications have had a highly positive impact on education.

Artificial Intelligence refers to the machines that can think like humans, solve various problems, understand human language, and respond accordingly. Additionally, it can recognize human images and comprehend the environment. The origins of artificial intelligence trace back to ancient times. However, its formal development began in the 20th century. In 1956, during the Dartmouth Conference, the term "Artificial Intelligence" was first introduced by John McCarthy and Marvin Minsky. For several years, the development of AI slowed down due to the limited capabilities of computers and insufficient funding.

As mentioned above, Artificial Intelligence has existed for many years and is now applied in almost every aspect of our lives. It also holds a significant place in education. AI is considered one of the most important technologies in the process. It has unique features in education, fundamentally transforming the education system and making the learning process more efficient and convenient. AI provides materials tailored to each student's level, checks tests, and analyzes errors. It also serves as a tutor available at any time. One of the widely used AI models in education is ChatGPT. In 2023, this model reached over 100 million users, making it one of the fastest-growing technologies. It has become a key tool for students worldwide in their learning process. ChatGPT has the ability to answer and explain scientific questions on any topic. Another new AI model is DeepSeek, which was developed in China in 2023 by an artificial intelligence company. The advancement of DeepSeek has opened new opportunities in AI and brought significant changes to technology. This model allows users to send up to 50 messages per day and receive responses. Compared to ChatGPT, it can perform more complex tasks.

Conclusion:

Today, technology is fundamentally transforming education and helping to increase the efficiency of the teaching process. However, while technology enhances education, it also has some negative effects. Therefore, maintaining a balance when integrating technology into education is essential.

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