

THE ROLE OF MODERN TECHNOLOGY IN EDUCATION

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Abstract:

In most countries of the world, the development of the education system is one of the global issues. Also, the importance of technology is having a high impact on learning environment, offering new opportunities for both teachers and students. Technology enhances the teaching process by providing interactive tools, digital resources, and platforms for real-time communication. It enables personalized learning through adaptive software that caters to individual student needs, fostering more effective and self-paced learning experiences. By making educational resources more accessible and providing a broader range of learning opportunities, modern technology is revolutionizing education, making it more inclusive, engaging, and tailored to diverse learning styles.

Key words: Modern technology, education, digital literacy, personalized learning, interactive learning, online education, educational resources, technology integration, student engagement, advantages and disadvantages, future of education.

“Technology can become the “wings” that will allow the educational world to fly farther and faster than even before – if we allow it.” – Jenny Arledge.

As the world continues to embrace technological advancements, the educational sector has been quick to integrate these innovations, transforming classrooms into dynamic environments that foster engagement, collaboration and innovation. Therefore, the role of technology in education is multifaceted, deeply influencing various aspects of teaching, learning, and administration. This article explores the significant impact that technology plays in education and how it is driving positive or some negative changes and developments in the way we teach and learn.

We cannot deny the fact that the developed world we see today can never be possible without the evaluation of technology. Even the International Society for Technology in Education (ISTE) promotes the important roles of technology in education. Only through a technology-driven education system, students have innovative learning solutions. In pandemic era of Covid-19, it would have never been possible for teachers to make students efficient learners at home if technology was not introduced [6].

Jim Knight (Rt Hon Lord Knight), the director of Suklaa Media & Education and former schools minister, said that the pandemic “accelerated the evolution of technology adoption, curriculum, and other key elements of learning” [1].

The integration of technology in education has brought about significant as well as positive changes in how learning is delivered and experienced. However, despite its potential to improve educational outcomes, the use of technology in education also presents several challenges. Here are some advantages and disadvantages of technology in learning process.

Advantages:

Provides a Better Interactive Experience during the Learning and Teaching Process:

With the introduction of mobile phones, tablets and computers, students are now able to do something they should have been able to do long ago – to learn actively and productively. For the first time, students can access a subject/teaching unit with enthusiasm thanks to applications, videos, simulations and digital books that make the learning process much more engaging. Moreover, having the opportunity to dig deeper into an area that interests them allows them to potentially recognize their interests and talents, and maybe even their future professions [7].

Access to Vast Educational Resources:

One of the greatest advantages of incorporating technology is its instant access to a wealth of educational resources. iPads and Chromebooks enable students to explore online libraries, educational apps, interactive multimedia, and virtual simulations. Some of the online libraries that I like to use for digital products are Boom Cards and Teachers Pay Teachers. I have stores on both platforms with many different digital resources.

Enhancing Digital Literacy Skills:

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Integrating technology into the classroom equips students with essential digital literacy skills necessary for their future success. Students become proficient in using various software, online tools, and applications, improving their technological competence. These skills are increasingly valuable in the modern job market, where digital literacy is a prerequisite in almost every field [5].

Disadvantages:

Distraction:

For students, having technology around might be distracting. More than anything else, their attention may be on the entertainment. Among the advantages and disadvantages of technology, this is a leading factor in drawbacks.

Replacement to Real Teachers:

In some schools, some technologies can take the position of the teacher. Today's interactive learning sessions are so successful that a student can learn without a teacher. This is because software or an app can take the place of a human teacher.

Health Issues:

Excessive use of technology can lead to health problems in children, including eye strain from prolonged screen time. Additionally, the negative impact of technology on mental health, such as increased stress and reduced focus, is a growing concern.

Poor Time Management:

Students often lose track of time when using technology in the classroom. Youngsters can easily adapt to new situations. However, they may end up with more screen time as the school is influential for each student. Time mismanagement is a major con among the advantages and disadvantages of technology [4].

Technology is infiltrating our education system at such a rapid rate that even teachers are no longer needed. Studies have been conducted to find out that students prefer online materials to offline classes, their usage rate is increasing day by day, and experts shared their opinions.

For example, The JRC report on the future of technology in education: emerging trend and policy implications identifies technological innovations with high potential to influence, in the medium and long term, pedagogical practices and the delivery of education at large. While the seven liberal arts – grammar, logic, rhetoric, arithmetic, geometry, music, and astronomy – formed the basis for education for a long time, in the age of generative AI, core skills such as writing, mathematics, communication, and knowledge about the world, needed to be thought [2].

Technology can become one of the most important tools for older students to achieve the desired achievements and knowledge. However, we should not forget about our young generations. They will definitely have challenges in usage of technology, since they start only writing and reading on the first years of schools.

The most important lesson we have taken away from the pandemic and the years leading up to it is that children need improved access to technology and educational opportunities to improve their lives. Also, experts believe that by 2050, 90% of people worldwide will have access to broadband internet. This will significantly affect future learning as almost 9 billion people could potentially participate in futuristic learning [3].

If we look at the last years when technology has changed education, we can face with some trends in different countries.

In past two decades, technology has gone through some incredible changes. For instance, only 47% of UK households had a mobile phone in 2000. Today, 84% of UK adults own a smartphone (and many children and teenagers have them as well) [1]

In conclusion, modern technology plays a vital role in shaping in shaping the future of education, offering unprecedented opportunities for personalization, accessibility, and engagement. Technology helps bridge geographical and socio-economic gaps, providing learners from all backgrounds with access to high-quality educational resources and global learning communities. However, while technology enhances educational opportunities, it is important to strike a balance. It should complement traditional teaching methods, ensuring that students still develop essential, emotional, and critical thinking skills. Ultimately, the role of technology in education is to empower both students and educators, fostering an environment where learning is more dynamic, inclusive and effective.

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