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## THE ROLE OF DIGITAL TECHNOLOGY IN EDUCATION

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**Abstract.** This article discusses the importance and role of digital literacy in modern education. Digital technologies help make the learning process more effective and accessible for students. However, issues such as internet connectivity problems and insufficient digital skills still remain. Moreover, the article examines the challenges related to the integration of digital technologies into education and suggests possible solutions. Despite these difficulties, digital tools play a vital role in improving the quality and effectiveness of learning. Students regularly use computers, tablets, and online platforms to develop their knowledge and skills. The digital learning environment also promotes independent learning and critical thinking. Also, the issues related to the implementation of digital technologies in education and their solutions are discussed.

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**Keywords:** *Online learning, e-learning, digital literacy, virtual classroom, ICT in learning, educational app, digital tools, blended learning, distance learning, Learning Management system (LMS), student engagement, online resources, modern teaching methods.*

### **Introduction**

In today's rapidly developing world, digital technology has become an inseparable part of education. The use of computers, tablets, and online platforms has transformed traditional teaching methods, making learning more interactive, flexible, and student-centered. Digital literacy is now a key skill that every learner must possess to succeed in both academic and professional life. Through digital tools, students can access a vast amount of information, collaborate with peers, and learn at their own pace. However, the process of integrating technology into education also brings certain challenges such as internet access problems and a lack of digital skills among some learners and teachers. Despite these obstacles, the benefits of digital technology in enhancing the quality and effectiveness of education are undeniable. Therefore, understanding its role and finding ways to overcome existing challenges is essential for the future of modern education.

### **Main Body**

According to the data, 68.2% of participants strongly agreed that they use digital tools regularly in their studies. This shows that most students are highly dependent on modern technologies in their learning process. Meanwhile, 18.2% of respondents gave a neutral answer, indicating that they might use technology occasionally but not consistently. In contrast, only 9.1% of the participants strongly disagreed with the statement, suggesting that very few students prefer traditional learning methods without the use of digital devices. These results demonstrate the

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growing importance of digital literacy and technology-based learning in modern education. In today's digital age, social media plays a significant role in education. It has transformed the way students learn, communicate, and share knowledge. While social platforms can serve as powerful learning tools, their excessive and uncontrolled use may also create serious distractions and reduce academic performance. Therefore, finding balance is essential.

### *Positive aspects*

Social media can be an excellent tool for collaboration and communication among students and teachers. According to research published in MDPI (2023), social media encourages knowledge-sharing and increases motivation to study. Students can easily exchange ideas, organize group discussions, and receive feedback in real time. Moreover, platforms like YouTube, Telegram, and LinkedIn provide access to educational videos, online lectures, and professional communities that help deepen understanding. The International Journal of Research (2024) states that social networks help develop 21st-century skills such as digital literacy, online communication, and virtual teamwork — all crucial for the modern world.

### *Negative aspects*

However, social media also has its drawbacks. Studies show that students who spend more than three hours a day on social networks are more likely to lose focus on their studies and experience decreased academic results (TIKM Proceedings, 2023). Another major issue is the decline in deep reading and concentration. Because information is available instantly, students often prefer quick answers instead of critical thinking and analysis (Scientific Education Journal, 2022). In addition, the large amount of misinformation and low-quality content online can harm students' understanding of real academic topics (Advanced Scientific Education, 2024).

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### ***Finding balance***

To benefit from social media without losing control, both teachers and students need to use it purposefully. Teachers should integrate social media into education only when it adds value — for example, for discussions, knowledge sharing, and academic networking.

Students, on the other hand, should learn digital time management: knowing when to be online and when to stay focused offline. Parents and educators must also work together to raise awareness about the benefits and risks of social media.

As recent research from The Guardian Education Report (2025) shows, banning phones entirely in schools does not automatically improve performance — instead, effective guidance and balanced digital strategies are much more successful.

Today's students prefer incorporating technology into all aspects of their lives, including education. The internet plays a crucial role in education, providing endless resources, tutorials, and support materials that enhance learning despite potential drawbacks like fraud. It is an invariable tool that helps students access information and improve their academic performance. Sustainable development, which includes social well-being, heavily relies on education. Information technology has become a key driver of educational reforms, introducing innovative learning tools such as devices, smartboards, MOOCs, tablets, laptops, simulations, dynamic visualizations, and virtual laboratories. These advancements have transformed education in schools and institutions.

### ***The Essential Role of Digital Technologies in Modern Education***

The globalization of education has already necessitated the application of digital technologies. Online platforms have been used for conducting classes, sharing resources, assessments, and managing day-to-day activities of academic

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institutions. However, the adoption of these platforms was often proactive. The COVID-19 pandemic forced institutions to adopt online teaching to sustain the education system. Developed countries were better equipped to handle this crisis, while developing countries worked hard to meet this requirement. Digital technologies have emerged as the savior of education during this critical time. This global crisis highlights the need for international integration in the education system. Digital technologies assist in developing essential skills for students' professional performance, such as problem-solving, structured thinking, and process comprehension. They are also preparing students for a more unpredictable and dynamic future where technology will play a crucial role. The skills and abilities acquired by students will be vital for their professional success. Educational resources and digital tools contribute significantly to improving and reframing education for the future.

### ***Application of Digital Technology in Education***

With today's technological growth, instructors must learn to utilize various gadgets, such as smartphones and tablet computers, or face marginalization. Teachers must also harness all available online resources to ensure that their materials are alive, engaging, and up to date. Technology is more than just playing video games and viewing animated films. The advantages are determined by how students, parents, and teachers use technology to improve education. When technology is used effectively for instructional reasons, the educational experience improves, and students become interested. Making e-learning systems compatible with new smart devices such as phones and tablets has been a significant element in the ease of access and faster uptake of digital learning. Specialized learning goods, such as animation, games, or AI-powered systems designed exclusively for edutainment, are also included. Technology-enabled innovations have helped



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facilitate learning across age groups and topics. The importance of Big Data and the application of analytics to learning was an essential but generally overlooked part of Education technologies.

### ***Challenges of Digital Technology in Education***

Educational technology is not without its difficulties, notably in implementation and usage. Issues regarding excessive screen time, the efficacy of instructors' use of technology, and concerns about technology fairness are also raised. The content has become more significant as a result of the COVID-19 problem. Educators must generate and comment on online educational content, encouraging students to analyze a topic from several angles in particular. Furthermore, while some students thrive in online learning settings, others struggle due to various factors, including a lack of support. For example, a student who has previously suffered in face-to-face circumstances may suffer far more in the current situation. These people may have been reliant on services that are no longer accessible. However, online education may provide difficulties for instructors, particularly in areas where it has not been the norm. Some of the reasons for the learning crises are widely known. One crucial factor is the poor quality of instruction. Teachers frequently lack topic expertise and have received little training. There are technology solutions to this, and they could be helpful in both training instructors and instructing students. Technologies can provide in-service training or a combination of online and in-person training.

Additionally, there is evidence that instructors require better incentives. They can educate but lack the motivation to do so. Even though education has always extended outside the conventional classroom, the changing circumstances and scale of digital and remote contexts demand significant adaptation, preparation, support, and engagement. Limited or no contact with students, rethinking h engagement,

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reaching, teaching approaches, appropriately addressing a range of unique needs, motivating students, handling conflicting time demands, and coping with constrained settings may contribute to attentive learning and teaching.

Some students are having difficulties as a result of this online schooling. Some students come from low-income families and do not have cellphones in their homes; thus, they struggle in school. Millions of youngsters simply do not have access to the internet at home. Students under 15 acquire this complex technology early, yet they struggle with poor vision and backache. Teachers are also having difficulty since some are utterly inexperienced with digital technologies. Nonetheless, they do everything possible to educate their children through online classes. College students who take more practical subjects than theoretical subjects face similar challenges because practical knowledge is not attainable in online programs. While technology can be considered yet another avenue for cheating, it is possible to design assignments and assessments so that such an occurrence is unlikely. On the other hand, open-book exams can be used to emphasize problem-solving and mastery over retention. Time-consuming processes such as tracking student attendance and performance can be sped up with automation. Because of their objective nature, engagement tools can assist in expediting grading for writing assignments, conversations, and participation and address typical student inquiries. Without proper information and communication technology equipment, internet mobile network connectivity, instructional resources, and teacher training, students cannot participate in distant education.

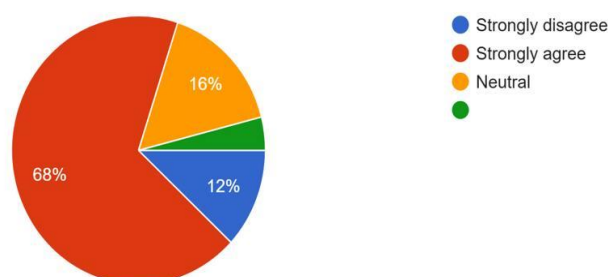
## Conclusion

In conclusion, technology has become an essential part of modern education, offering students new ways to learn, create, and connect. It not only makes studying more flexible and engaging but also prepares learners for a digital future where

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adaptability and critical thinking are key. The survey results clearly show that most students rely on digital tools regularly, reflecting how deeply technology is integrated into today's learning process. As education continues to evolve, combining traditional teaching values with innovative digital methods will be crucial for building a more effective and inclusive learning environment.

I use digital technology (computers, tablets, online platforms) regularly in my learning process  
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