

THE ROLE OF DIGITAL TECHNOLOGIES IN EDUCATION

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Abstract: Knowing the class of students is an important part of the teacher's work since it makes it easier to understand when and how to intervene in the class learning process. In this regard, technology has much to contribute. Many technological resources offer to learn reports, helping faculty to identify, individually or collectively, where the subject matter is the most successful in which students need to study more. In addition, the current situation surrounding the Covid-19 virus, which greatly affected how teachers around the globe work, has influenced the teaching environment and turned it into a virtual reality, where many teachers and lecturers are forced to work with more innovative programmes such as, Zoom, Loom, Learn-Cube and so on, which let them present classes to students, while applying strategies aimed at reducing anxiety.

INTRODUCTION

Digital technologies are a powerful instrument that can help improve education in various ways, such as making it easier for instructors to generate instructional materials and providing new methods for people to learn and collaborate. A new era has arrived with the Internet's worldwide reach and many intelligent devices connected to it. Technology has continued to play an essential role in delivering education to children outside the classroom. Digital learning fosters creativity and gives students a sense of success, encouraging additional learning by thinking outside traditional techniques. All nations were able to adopt remote learning technologies utilizing a combination of TV, radio, online, and mobile platforms, which is commendable. These provide easy access to information, easy retention of information, increased storage of information, and improved presentation of information; education became more interactive, easier sharing of knowledge and increased enthusiasm in learning. 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 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. Schools and educational institutions realize the value of comprehensive student and instructor performance data as they extend their usage of virtual classrooms, e-learning platforms, and online exams.

Materials and methods

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 analyse 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.[1] 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 engagement, 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. There is also evidence that low-tech interventions for "instruction at the appropriate level" can significantly affect learning. Because low-tech solutions are less expensive and funding restricts impoverished nations, careful investigation is required to establish whether high-tech or low-tech solutions are better or not. Teachers are teaching through video, but they are not always teaching better than they would if they were standing in front of a classroom. More massive open online courses are being offered and taken up, but many are not for primary education and do not address the learning issue. It necessitates hardware and connectivity at home, inaccessible to children in low-income homes. Gamification and other strategies may encourage youngsters to devote more time to studying. Finally, consider that effective learning outcomes may be obtained without using education technologies. Some students are having difficulties as a result of this online schooling. Some students come from low-income families and do not have cell-phones 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. Students from resource-poor locations, isolated rural areas, and low-income households are more likely to fall behind. Learners with disabilities or who speak a language other than English at home will require additional individualized assistance.[2]

Digital technologies allow students to experience the globe and go to faraway places from the comfort of their computers. Inviting a guest speaker to talk to the class about their expertise is terrific to spice up any lesson plan. Video conferencing systems make it simple to bring a subject matter expert face-to-face to our classroom, no matter where they are. We can easily organize a classroom video conference with kids from another institution. Online polls and other digital technologies engage all students, timid kids who would not ordinarily raise their hands in class. Online engagement tools enable checking in with students regularly to solicit input on course materials and assignments. Student insights can also be utilized to identify areas where students may be struggling. Student response systems promote digital citizenship in the classroom by allowing students to participate in class while also being rewarded. Schools serve an essential role in our communities, and their closure has far-reaching consequences for the psychological well-being of many families and children. Digital technologies can easily take up this challenge. Online learning allows students to learn at their speed, pause and rewatch videos, and explore course content independently. Quizzes are another active learning strategy that education technology may help. Students may begin working on a project together in class and fluidly collaborate, communicate, and bounce ideas off one another utilizing social media, interactive

whiteboards, and other technology. Physical and social constraints allow students to collaborate from any- where and at any time. Technology has also enabled students to join in spontaneous discussions and obtain immediate answers to any difficulties or questions regarding a subject. Because of self-paced learning and individual variances, students will virtually always complete their work at various times. When this happens, maintaining students' attention is as simple as giving them access to educational films, course-based games, or interactive learning tools. [3]

Conclusion

As a result, faster-paced students no longer need to wait for all of their colleagues to finish before continuing their studies, while slower-paced students are no longer tempted to rush through their work. This Education 4.0 program will be implemented in future schools to improve education and better prepare the next generation of potential. Future of technologies in education. Small, medium and large-scale education technology companies have started proliferating in the future and are offering various new digital solutions to academic institutions. This will improve the quality of digital infrastructure across the country, making innovative educational technology more accessible to larger masses. We foresee the removal of all linguistic boundaries and better Online availability of learning resources in regional languages. E-learning and m-learning programs provide students and teachers access to a vast pool of information content. While technology will play an essential role in shaping the future of education, ensuring that new teaching tools are used effectively will require a new generation of educators who understand the importance of human connection in the classroom. These can lead to a satisfying and engaging career in education. Students gain the knowledge and skills necessary to employ new educational technology to maximize their advantages for today and in the future. In upcoming years, education trends will ride the tide of growing internet capabilities and network capacity, making it easier to incorporate innovative technology into classrooms. However, there is no complete substitute for offline (classroom) teaching & learning. Thus we have reached the era of hybrid teaching and learning, where both online and offline systems are integrated to enhance the outcomes and are envisaged as an outcome of the implementation of Education.

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