Evaluating the Role of Digital Technology in Modern Education

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Abstract

Technology has dramatically transformed education by providing access to a vast array of resources, such as online books, podcasts, and learning materials. A high-quality education is a key pillar of the 2030 Agenda for Sustainable Development set by the United Nations, which aims to ensure inclusive, equitable, and high-quality education for all. To achieve this, digital technology has become crucial, playing a significant role in both modernizing traditional methods and addressing educational disparities. Ensuring that all children receive quality education is a primary goal of digital technology. An effective education system is essential for creating opportunities for a better life. However, there remains a significant gap in educational opportunities between countries, and addressing this inequality is a major challenge. This paper briefly examines the need for digital technology in education, its impact, and the challenges it faces.

Keywords:- Technology, Education, Challenges, Students, Digital, Sustainable Development

Introduction: Education is now seen as an endeavor for social and political change, with each person's growth serving both her financial interests and the creation of a fair and compassionate society. In order to achieve sustainable development and peaceful coexistence, it also has to raise awareness and develop agency. Universal education is emphasized in international policy initiatives as the Sustainable Development Goals, the Millennium Development Goals, and the Education for All (Dakar, 2000; Jomtien, 1990). Digital technologies have progressed from isolated initiatives to global networks of instruments and applications that link individuals and objects while assisting in resolving both local and global issues. Sustainable Development Goal 4 (SDG 4) for education has the potential to accelerate progress toward achievement and change the ways in which universal access to education is provided. New media is centered around digital technologies and information science. Information technology's all-encompassing capabilities are applied to integrate its various

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domains, including science and art, business and education, culture and the arts, and management, all based on the creative techniques of modern art and the philosophy of mass communication. New media comprises a broad spectrum of media formats. The communication medium and the digitization of its content distribution are what set new media art apart. Because digitization makes data gathering, access, processing, and sharing easier, it helps new media artists meet their creative needs. In the post-language era, following text and electronic technology, it has emerged as a new information carrier. Digital innovation has proven to have the ability to enhance, augment, and revolutionize education. It can boost learning outcomes, relevance, inclusiveness, and elevate the governance and management of education. Conventional classroom training fails to offer an instantaneous learning environment, quicker evaluations, and more participation. Conversely, technology and digital learning resources fill this gap. Traditional learning approaches just cannot match some of the efficiencies that these technologies offer. It makes sense for schools and other educational institutions to make effective use of cell phones and other wireless technology devices by integrating them into the classroom as these devices become more and more common among the general public. Learning is, in fact, more enticing to the younger generation because of the versatility and non-intrusive nature of today's technology. When schools close and there is disruption to education, online learning can help lessen the impact. Digital technologies in education offer several advantages, one of which is their increased accessibility. Geographical boundaries are eliminated and chances for lifelong learning are created when learners may access instructional content at any time and from any location to online platforms and digital tools. Learning experiences can be tailored and self-directed to this flexibility, which also accommodates different learning styles and individual pace. Digital technology can be a distraction in the classroom, as children are easily distracted by games, social media, and other non-educational content. This distraction may impede learning and degrade the quality of instruction. The usage of digital technology may put personal information and student data at risk of privacy and security breaches. To protect student privacy, educational institutions need to implement robust security measures. Digital methods has transformed education and spawned innovative methods of both instruction and learning. It has made online education easier, enhanced availability of instructional materials and provided customized learning experiences. It also poses a variety of challenges, such as the digital gap, distractions in the classroom, and privacy and security concerns. Educational institutions need to solve these challenges and capitalize on the benefits of digital technology in

order to provide students with a top-notch education that prepares them for life in the digital age. In the present study, it is examined how the shift to digital technology and how well people use it in our contemporary society create new opportunities, challenges, and barriers for education. As a result of young people's widespread usage of technology and the difficulties schools confront in integrating and utilizing it.

Digital Technology in Education: Over the past twenty years, technology has brought about substantial changes in the education sector. Nowadays, the majority of students do their academic work, including taking notes, attending lectures, and managing their assignments, using internet-enabled devices like laptops and smart-phones. India is among the world's second-largest online markets, according to research from 2022, with 900 million active internet users and a 47% internet penetration rate. According to reports, by 2025, the percentage of people using the internet is predicted to surpass 55%. The unexpected rise in internet usage has caused digitization in many sectors of the economy, most notably education. According to Higgins, Xiao, and Katsipataki (2012), digital technology can be useful and competent when used to enhance learning outcomes. For example, teachers utilize chalk and blackboards to write them when instructing and teaching their students. The children who are seated towards the rear of the classroom have difficulties. Education institutions provide education on technology for their students' needs. It is regarded as the learning process' lifeblood. Technology is an essential component of any task that people do when working on articles, reports, research papers, or projects. Although many believe they can obtain a wealth of information on the internet, books, journals, periodicals, and papers are still valuable. Universities today have adopted digital technology to enable people to access a vast array of electronic journals and books on the internet. These are some creative ways that technology can be used in the classroom:

Through Classroom Flipping, Teach Students Essential Soft Skills: Using the proper technology, teachers can assign pupils a topic to present and discuss. In order to clarify the subject, they could make a podcast, PowerPoint presentation, or movie. Students will gain knowledge about evaluating various web sources, comprehending how to locate information online, confirming information acquired online, and honing their research techniques as a result of this.

Make Use of Internet Resources to Enhance Cooperation: Students can edit and share one other's work using a variety of online applications, such as Google Docs. With collaboration being a skill that will likely be in high demand in the future, these applications are helping kids improve it. Especially in light of the rise in remote work, which is a trend for the workplace that will continue. Consequently, pupils who possess strong collaboration abilities will be able to effectively handle situations involving distant work.

The game-like aspect: Through games or other interactive learning resources, game makes learning possible for pupils. By using game-based features, fresh and complex material is immediately remembered and understood by pupils. Students' level of involvement is also raised, they are connected to the real world, and they receive immediate feedback. Teachers can instruct children in typing quicker by, for instance, using typing games. This can involve joy and excitement as well as being very engaging. To help students learn how to work together, teachers can also divide them into groups.

Impact of Technology on Education: An enormous amount of data can be stored in comparatively small spaces to digital technology. Small devices like mobile phones are capable of holding large volumes of media, including images, music, movies, contact information, and other documents. Numerous learning opportunities have been made possible by developments in digital technology. Information may now be transmitted to any group of people, from any location, due to technology. Worldwide access to education has increased, and information and communication technology now plays a vital role in daily life. In the present world, one of the most talked-about subjects is digital education. With information readily available to us and a world growing increasingly interconnected, it is getting more and more difficult to tell what is real and what isn't. Some positive impact on education is given below:

Positive Impact

Monitoring student progress is crucial for identifying areas for improvement and areas that require attention. Digital Technology, schools can keep a close eye on their students' progress. This can include attendance data, individual assessments, and exam outcomes. With the use of this data, we can organize classes and provide the appropriate materials to support students in reaching their objectives. These factors combine to make digital learning enjoyable in addition to being

advantageous. It is an excellent method for group work, conversation, and general learning improvement.

Students now have greater influence over their education to digital learning, which fosters a culture of increased student accountability and autonomy over the subjects and methods of study they choose to pursue. The student will have some control over the learning environment, even though the institution will still have some responsibilities in this regard.

Teachers and students can strengthen their relationships by participating in online communities. Sharing with peers virtually is often more comfortable for younger people in particular than it is in person. Technology may be a great tool to create communities between students and teachers, offering support and advantages to all, whether through community chat groups or a more formal learning environment.

We must always be moving, always learning new things. Since technology is always evolving, we must stay ahead of the curve by implementing digital teaching and learning strategies along with engagement tactics. It is crucial to provide students with the technological skills and problem-solving abilities necessary for success in the workplace.

We have to accept new methods of doing things as education develops. In the classroom, micro-learning, and other instructional strategies are gaining traction. By implementing new digital learning methodologies, students can acquire new abilities and learn how to use and embrace new technologies.

Students now have access to internet communication tools that they did not have before. As a result, students can now interact with their classmates on projects, ask questions, and offer comments in a way that was not previously feasible.

Students can readily access and utilize recorded lectures as a reference in digital education. They learn the material more quickly and have a deeper understanding of it as a result. Having access to more reading materials and other learning resources is also quite convenient.

Technology is a potent instrument that has the potential to both promote and change education in a variety of ways. It can facilitate new methods of learning for individuals as well as make it simpler

for teachers to select instructional resources. An exciting new era in education is emerging thanks to the internet's global reach and the readily available smart devices that can connect to it.

Negative Impact

The goal of technology is always to expedite and simplify the execution of specific mechanical tasks. The majority of schoolwork has been mechanized, nevertheless, by technology. When they have access to a phone calculator and autocorrect software, why would a child still need to learn the fundamentals of algebra and spelling? Thus, what started out as a good idea has resulted in a situation where future generations will need technology to do daily cognitive task. Furthermore, it should be mentioned that youngsters who rely solely on technology to find solutions to their academic challenges eventually lose the highly-sought-after ability to solve problems.

One of the biggest issues teachers deal with is exam cheating and their inability to gauge how well their students have understood a lesson. The largest issue with online exams is that teachers frequently are unaware of whether or not their pupils are using another device to complete the test. Due to educational institutions' incapacity to ensure that students truly acquire the knowledge required for higher education or to perform their jobs, this issue may have long-term repercussions.

Digital tools, while demonstrated to enhance student progress and collaboration on projects, ignore our innate need for immediate, face-to-face engagement. To be more precise, despite having evolved into social creatures over tens of thousands of years ago, we now believe that we can simply manipulate our genetic makeup. While teenagers engage with their parents, instructors, and peers, the rate of adolescents diagnosed with depression has been rising, and it currently stands at an astounding 20%. Teachers and educational institutions can only hope to address this issue by encouraging youth to contact with others in person.

Challenges Faced by Digital Technology in Education: Digital learning involves many different factors. Zoom calls are just one aspect of online learning. Both students and teachers can benefit from digital learning when it is implemented properly. Many challenges are faced during the implementation of digital technology. Some challenges are mentioned below:

Self-discipline is a common problem for students, and attending classes online might exacerbate this issue. Pupils who struggle with procrastination may find it difficult to sit down and do the assignment on their own without prompting. Since attendance is typically not required, it can be simple to overlook an assignment or even the entire class when learning digitally.

One of the main problems with digital learning is that it lacks teacher interaction. Many students find it challenging to interact and communicate with their lecturers through online learning. When a teacher is not there, it might be difficult to maintain students' attention. The same is true for subjects like the sciences, where attendance is usually required, which might make it challenging to understand the material. Peer social contact is another issue. Students are unable to collaborate in person on projects and do not form friendships as soon. Pupils are unable to participate in group projects, vigorous conversations, or classroom humor.

Educator-student relationships are cultivated as part of the learning process. Teachers now need to come up with new strategies for grabbing students' attention as more instruction is done online. Nonetheless, it's becoming much more important to keep pupils engaged and inspired. Instructors find it challenging to keep things under control while students are learning online since it is so easy for them to become sidetracked.

AI has the potential to be beneficial if it is applied to give educators a variety of pedagogical and content options based on assessments of learning environments. It is evident that there is a risk of using this to further de-skill and diminish the function of teachers. Second, the way that these "big data" are being gathered by businesses under the "finder is owner" paradigm may expose instructors and students to political and economic spying. Perhaps more significantly, from the standpoint of education, the transformative potential of education necessitates a move from the historical to the normative, but the fundamental function of artificial intelligence is to forecast future events based on historical patterns. AI is already entangled in bias disputes due to its propensity to project the past.

Conclusion: To maximize all of the benefits and minimize all of the drawbacks that digital technology, whether it be knowledge or practice-based, offers to students' education, it is essential to strike a balance between technological use and social contact. Provide all students online access to high-quality instruction and opportunities for learning in locations where they would not

otherwise be available by utilizing technology. The possible benefits of online learning include greater educational access, better learning opportunities, enhanced student performance and abilities, and a wider range of educational possibilities. With the help of digital technology, students may easily access a great amount of material, which facilitates their study and learning about a variety of disciplines. Information availability also makes it possible to create more individualized learning programs that are tailored to the interests and needs of each individual learner.

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