A review of comprehending the function of digital technologies in education

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ARTICLE INFO	ABSTRACT
	A key element of the 2030 Sustainable Development Agenda of the United Nations is high-quality education. It seeks to guarantee all students receive a high-quality, inclusive education. Digital technologies have become a vital instrument in accomplishing this objective. With the use of these technologies, one may easily identify the sources of emissions, stop further harm from occurring by using energy-efficient alternatives to fossil fuels and reducing their carbon footprint, and even eliminate excess greenhouse gas emissions from the atmosphere. Digital technologies aim to increase productivity and efficiency while reducing or eliminating waste and pollution. The educational system has been significantly impacted by these technologies. The current COVID-19 pandemic has solidified the use of digital tools in education even further. The entire educational system has undergone a paradigm shift as a result of these digital technologies. It serves as a mentor, an assessor, and a co-creator of information in addition to imparting knowledge. For pupils, technological advancements in education have made life easier. These days, students prepare presentations and projects utilizing a variety of software and tools rather than pen and paper. An I Pad is rather light in comparison to a stack of notebooks. It's simpler to navigate an e-book than a thick book. These techniques support raising research interest. This essay addresses the main uses of digital technology in education as well as their problems. It concludes with a brief discussion of their necessity. **Key words:** Sustainable, inclusive, paradigm, assessor, solidified.

INTRODUCTION

Social well-being is a component of sustainable development and is reliant on education. Information technology has developed to disseminate knowledge and is a major impetus behind innovations in education. Education in schools and institutions has changed as a result of the introduction of new technology-assisted learning tools like mobile devices, tablets, laptops, smart boards, MOOCs, simulations, dynamic visualizations, and virtual laboratories. Research has demonstrated that one of the most economical ways to educate developing minds is through the Internet of Things (IoT). It is also a strong system for incorporating an excellent educational experience for all.

Businesses that provide educational technology are always trying to come up with new ways to give people who can't afford proper schooling more access to education. Social media has advanced significantly as an educational tool. Social media is widely used by educators and learners alike as a vital component of the total e-learning process. These days, it is an essential forum for information sharing regarding important subjects.

Social media platforms not only facilitate information sharing at any time and from any location, but they also offer excellent networking opportunities for the creation of new friendships and even employment.

Conventional classroom training falls short of offering more involvement, quicker evaluations, and an instantaneous learning environment. On the other hand, technology and digital learning tools fill this gap. Traditional learning approaches cannot match some of the efficiencies offered by these technologies. Given the growing public popularity of smart phones and other wireless technology devices, it makes sense for educational institutions like schools to effectively utilize them by integrating technology into the classroom. Indeed, the versatility and non-intrusive nature of today's technologies make education more appealing to the younger generation. But because traditional teachers are reluctant to use modern technology and gadgets in the classroom and see them as distractions rather than wise teaching tools, it could be a difficult strategy to implement at first.

Students will find it easier to organize if we have an online classroom calendar that shows us when classes, assignments, field trips, speaker events, exams, and semester breaks are scheduled. Student response systems, like clicker devices and smart phones, give teachers a quick and simple way to assess how well their pupils understand the material being delivered and whether further explanation is needed.

Digital technologies have an impact on agricultural operations and may soon completely transform farming in industrialized nations by significantly lowering water consumption and decreasing our reliance on pesticides. COVID-19 Lockdown, quarantine, and pandemic are three terms that have just lately entered our vocabulary. People all throughout the world are aware of the devastation the corona virus epidemic has wrought. Digital technologies are helping to at least stabilize the educational sector throughout this crisis. From the comfort of their homes, students are learning. Students have an interesting learning experience when technology is incorporated into the classroom, which keeps them focused and engaged in the material. The use of computers, projectors, and other state-of-the-art technology in the classroom has the potential to make learning engaging and enjoyable for students.

Digital learning is a great way to reduce expenses, make better use of resources, encourage sustainability, and increase both the reach and impact for teachers and students. It also has positive effects on the environment because it uses less paper for books and handouts and allows for time savings and convenient research. The modern world and its various facets are heavily reliant on technology. The global digital revolution has started to seep into the field of education. Technology is predicted to improve education by making it more affordable and accessible since it is quickly changing how students learn. This essay provides a basic overview of how digital technologies are used in education.

Aims of the research:
The following are the main research goals of this paper:
RO1: Investigate the necessity of digital technologies in the classroom;
RO2: to provide an overview of the value of the digital classroom and to define the applications of digital technologies in education;
RO3: to list the major obstacles that digital technologies in education face.

Digital technologies are essential for schooling
The use of digital technologies has already become necessary due to the globalization of education. There were online tools available for administering the daily operations of educational institutions as well as for conducting classes, exchanging resources, and doing assessments. On the other hand, proactive use of these platforms was made. In order to maintain the educational system, the COVID-19 Pandemic has compelled the institutions must switch to an online teaching model. Developed nations were prepared to handle this issue. Developing nations, however, put a lot of effort into meeting this criterion. In this crucial period, digital technologies have emerged as education's savior. This global crisis emphasizes how important it is for the educational system to be internationally linked.

If technology is employed in the classroom, kids may become more interested in what they are studying. Given that today's youth are largely acclimated to using electronic devices, integrating them into education will surely help to spark their curiosity and increase their engagement levels. Students have an interesting learning experience when technology is incorporated into the classroom, which keeps them focused and engaged in the material. The use of computers, projectors, and other state-of-the-art technology in the classroom has the potential to make learning engaging and enjoyable for students. By assigning assignments that use digital resources, oral presentations, and group projects, teachers can make their students' education more dynamic and interesting.

The integration of digital tools with computers and other devices empowers students to take charge of the learning process and take a more proactive approach. A learning efficiency can be approved by the instructor,

who also acts as a guide during this procedure. Through the abundance of digital tools, students can post their work or get the necessary data. Using instructional strategies that maximize learning, such as gamification or flipped classes, is made simple by digital technologies. As a didactic instrument that combines many approaches and allows for the presentation of unique itineraries to each learner, learning landscapes have developed. Technology enhances the inspiration and significance of the training.

Digital classroom
Using electronic tools or platforms to teach pupils, such as social media, multimedia, and mobile phones, is what is meant by a "digital classroom." The use of digital technology in education has improved and changed the educational landscape of today. With the use of technology, the entire curriculum may be completed through digital learning, which enables students to study fast and efficiently. The sole goal of the digital classroom is to teach using technology. Students use laptops, tablets, Chrome books, and other technological or internet-connected devices. Rather than having students take notes on what the teacher has taught, the majority of the curriculum is given to them online via an interesting and dynamic platform.

Education is fundamentally a form of communication, despite its many facets. The internet has resulted in the rise of new communication channels, which have extended the options for the transmission and access to educational information. These digital platforms and media act as catalysts for learning. A digital classroom's features are displayed in many ways.

Digital technologies are a potent tool that can enhance education in a number of ways, including by making it simpler for teachers to create lesson plans and by offering fresh approaches to teaching and learning. With the widespread use of the Internet and a multitude of smart devices linked to it, a new era has begun. Thus, it will be up to instructional designers and educators to harness the revolutionary potential of modern digital technology to transform education so that everyone, wherever, can access high-quality training. Children are still receiving their education outside of the classroom thanks in large part to the continuous contribution of technology.
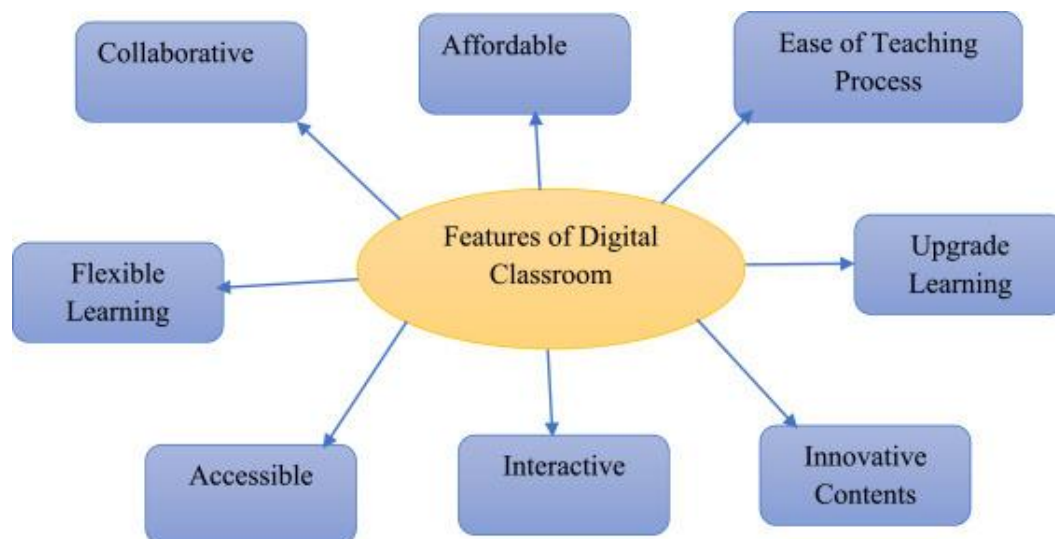
Applications of digital technologies in the classroom.
Boost the productivity of teachers
The use of cutting-edge technical tools can increase teaching productivity by enabling better planning, simple and practical learning, speedy evaluation, better resources, new skills, etc.

1. Create virtual libraries
Technological developments have contributed to the establishment and growth of online libraries, which have eliminated the need for physical space and enabled global collaboration among scholars, educators, and students. Subject matter experts have been able to discuss certain subjects and review teaching pedagogy, curriculum, and assessment techniques through online forums.

2. Encourage online learning
In actuality, advances in technology have made distance learning much more popular. It makes all learning materials easily accessible and makes it convenient for the facility to communicate with the instructor. With the use of educational technology and technologies like social learning platforms, teachers can organize and oversee groups fast.

3. Establish a virtual classroom

Diverse learning management systems (LMS) have been made possible by digital technology in education. These LSMs have encouraged the use of virtual classrooms in which instructors may communicate with students in real time, share resources, give lectures, evaluate their learning, get feedback, and address any questions they may have.

4. Develop your insight and knowledge

Technologies work to increase students' knowledge, comprehension, and abilities so they can succeed both individually and collectively. Through engaging and educational materials, teachers may foster children's curiosity and inquisitiveness, which has been connected to their academic achievement.

5. Establishing Inclusive Educational Environments

Every student, regardless of ability level, has an equal opportunity to learn in the same location in an inclusive learning environment. Teachers can gather statistics on student performance while fostering cooperation and inquiry in inclusive learning environments that are made exciting by virtual classrooms, video, augmented reality, robots, and other technological tools.

6. Enhancing communication and teamwork abilities

Two essential qualities that contribute to the development of a successful professional are teamwork and communication abilities. Digital tools are crucial for the development of these abilities.

7. Overcoming obstacles in education

Students use online platforms to work together to solve current educational difficulties. Hackathons have become a popular and effective way to solve a wide range of difficult challenges. By exchanging ideas and opinions, students can collaborate on projects and express themselves.

8. Improved availability of educational materials

It is now feasible to access instructional resources seven days a week, at any time. The resources were easily accessed by students at their convenience thanks to cloud storage, lecture video recording, and soft copy notes. Parents can examine the caliber of lectures and notes by using these resources.

9. Urging pupils to finish the course material

The most direct technique to support pupils is through computer-assisted learning, which assists teachers in finishing the syllabus. In a classroom, pupils may have varying baseline learning levels, and teachers are often motivated to teach to the highest strata, which results in many students falling behind. These technological advancements have aided these pupils in finishing their curriculum.

10. Electronic books

Thanks to technological advancements, information may now be found by students more quickly and accurately. Traditional textbooks are being replaced by e-books and search engines. However, by integrating technology into the classroom, students might start to learn about being responsible in the digital world. Through the use of the classroom as a microcosm of the wider digital world, students can practice engaging, searching, and talking with other digital citizens. Additionally, technology has improved the chances for cooperation and communication. Traditionally, cooperation has only been possible amongst students in the same building or classroom. Technology of today allows for hitherto unthinkable levels of cooperation and communication. Children can impart their knowledge to pupils in different schools across the nation.

11. MOOC Portal

MOOCs help students advance their skills and certifications. It provides millions of students who cannot afford an education with access to a variety of skill-based courses, improving their employability. MOOCs allow professionals in the workforce as well as students to study whenever and wherever they choose, at their own pace. Additionally, this platform offers lecture courses that lead to certificates that are recognized by organizations and businesses as positive steps in the correct direction. The market for online courses offered via the MOOC platform is substantial, based on recent trends. Professional study participants and employed executives are more driven to expand their skill set in order to capitalize on the expanding employment prospects in specialized industries. MOOC-based individualized education is gaining traction.

12. Learning through videos

Students frequently participate in blended learning that combines technology-based entertainment with video-based instruction. This kind of educational tool encourages active participation from users. This type of instruction includes eBooks, podcasts, instructional applications, and audio-video, among other materials. Kids are thrilled to learn new ideas with these digital channels. In the future, traditional and digital teaching-learning approaches will increasingly overlap as the internet grows more affordable and available. Freely accessible resources are offered by online education for study, instruction and research. It creates an

atmosphere for self-learning by allowing students to interact with a variety of study materials that are freely accessible online.

13. Dynamic education

Teachers can establish a more engaging and dynamic learning environment by utilizing technology. Additionally, technology creates a dynamic learning environment in the classroom by digitizing textbooks and adding connections and QR codes for subject-specific learning and assessment. The introduction of new technologies may benefit technologically savvy educators. Software is used, for instance, to set up flipped classrooms or perform specialized tasks. In this case, students can watch lectures that have been pre-recorded as homework and show up to class prepared to debate subjects and material. Classrooms using new digital instruments need to be managed and trained for. Instructors need to be productive with a range of displays and computing platforms both in the classroom and online. Teachers claim that the internet and other digital technologies have significantly increased the number of subjects.

14. Transitioning to Hybrid Education

Using both online and offline instruction in addition to one another is known as hybrid teaching and learning. This is Education result and the future.

Discussion:

Using digital technologies, students can travel the world and visit distant locations from the comfort of their computers. Bringing in a guest speaker to share their expertise with the class is a great way to add some spice to any lesson plan. Using video conferencing systems allows us to easily bring in subject matter experts in-person, no matter where they are. We can easily set up a classroom video conference with students from another institution. Using online polls and other digital technologies, even shy students who might not raise their hands in class can participate. Online engagement tools allow us to regularly check in with students, solicit feedback on assignments and course materials, and student insights can be used to identify areas where students may be struggling.

By rewarding students for their participation in class, student response systems help to foster digital citizenship in the classroom. Our communities depend heavily on schools, and closing them would have a profound negative impact on the mental health of many families and children. This is an issue that digital technologies can easily meet. Students can explore course material freely, pause and restart videos, and learn at their own pace using online learning.

Another active learning method that education technology may support is the use of quizzes. Through the use of social media, interactive whiteboards, and other technologies, students can start working on a project together in class and collaborate, communicate, and bounce ideas off one another with ease. Students can work together at any time and from any location as long as there are no social or physical barriers. Additionally, technology has made it possible for students to participate in impromptu conversations and get prompt responses to any problems or inquiries they may have about a subject. Due to individual differences and self-paced learning, students almost always finish their work at different times. When this occurs, it's as easy as providing informative movies, course-based activities, or interactive learning resources to keep students' attention.

This eliminates the need for slower-paced students to feel pressured to finish their work quickly, and eliminates the need for faster-paced students to wait for all of their peers to finish before continuing their studies. In order to enhance education and better prepare the potential of the upcoming generation, this Education 4.0 program will be adopted in schools in the future. Artificial intelligence will also improve the efficiency and lower emissions of driverless cars. Artificial Intelligence is being used by material scientists to create biodegradable plastic alternatives and methods to clean our oceans. Although up cycling and recycling might seem like straightforward processes, they are quite powerful tools for advancing environmental initiatives. Recycling is a game-changer for sustainability, whether it is through businesses creating new products out of discarded items or consumers reusing bottles to reduce plastic waste.

The use of technology in education in the future

In the future, there will be a greater number of small, medium, and large-scale education technology businesses that will provide academic institutions with a range of innovative digital solutions. This will raise the standard of digital infrastructure throughout the nation and increase the accessibility of cutting-edge educational technology for a wider range of people. All linguistic barriers will eventually disappear, and there will be more online resources available for studying regional languages. Programs for mobile and e-learning give educators and students access to a wealth of knowledge. A new generation of educators who recognize the value of human connection in the classroom will be necessary to ensure that new teaching tools are used

effectively, even if technology will undoubtedly play a significant part in defining the future of education.

These may result in an interesting and fulfilling career in teaching. Pupils acquire the information and abilities needed to make the most of modern instructional technology, both now and in the future. Future trends in education will follow the expansion of networks and internet capabilities, which will facilitate the integration of cutting-edge technologies into classrooms. On the other hand, offline (classroom) instruction and learning cannot be fully replaced. Thus, the era of hybrid teaching and learning has arrived, wherein offline and online systems are combined to improve results and are anticipated to follow from the application of education.

In summary

In the context of education, "digital technology" refers to a range of devices and software designed to support students with specific accessibility requirements. Using technology in the classroom is the most efficient approach for teachers to do fewer repetitive, time-consuming tasks. By automating or partially automating routine tasks like attendance tracking and performance monitoring, educational technology apps can save a significant amount of time and energy. Pupils receive instruction on responsible and strategic use of technology, which can aid in decision-making and the development of self-discipline.

The use of technology in the classroom can assist pupils in becoming lifelong learners. With the aid of these tools, students can explore a virtual world and acquire digital content in a way that best suits their learning preferences. Students can study at their own pace because digital content development tools allow for customization of teaching and learning. The digital classroom integrates technology into education by using electronic devices and software to instruct pupils. Using computers and the Internet, a typical classroom can be converted into a digital classroom. With the aid of advanced equipment and technology, students may learn more effectively and monitor their progress. These technologies will be successfully incorporated into education in the near future to improve the performance and digital learning environment for students.

In order to conduct complex data analysis and management decisions for long-term planning in areas like climate change, biodiversity protection, air and water security, disaster resilience, etc., modern technology have become essential. These technologies are examples of innovation that promotes social and economic progress while taking into account natural resources. These seek to create a long-lasting product while drastically reducing ecological and environmental risks. These methods lessen pollution, environmental deterioration, and other adverse effects.

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