# Digital technology and its role in education

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## Abstract

Digital technologies are the technologies that are used to support teaching and learning such as laptops, tablets, mobile phones, online resources, digital tools, systems devices, and resources. Digital tools can produce, reserve, and operate the data. It aims to ensure inclusive and equitable quality education for all. Digital technologies have emerged as an essential tool to achieve this goal.The use of information and communication technologies in education can play a crucial role in providing new and innovative forms of support to teachers, students, and the learning process more broadly. Beside its day to day use by the students in the school environment ; its safety and precautions to handle become serious task.The school must create a learning environment involving the safe and responsible use of digital technology. This is largely achieved by fostering a positive culture of digital technology use where challenges are understood to exist. Moreover while learning about internet safety in school, students feel safer to speak with educators about things they see online that could potentially be harmful. When teachers are aware of dangerous activity online, they can possibly prevent tragic situations from happening. Open communication between students and teachers about online activity can keep students from harm. Common Sense Education offers a series of lesson plans to raise awareness about internet safety in the classroom. However, it's important for schools not to depend upon students or teachers to report inappropriate online content and behaviour. Screen monitoring software can alert administrators to at-risk behaviour on school computers. It also alerts administrators to mentions of suicide or self-harm, allowing them to give vulnerable students the help they need.

.**Keywords:-** Resources, inclusive, face to face, screen monitoring, competency, collaboration, digitalisation, innovation, activity based learning, safeguards, flipped learning, modernisation.

## .Introduction

Digital education is also known as technology-enhanced learning or e-learning. In simple terms, digital education is the use of technology and digital tools to teach and learn. This innovative use of digital technology is beneficial for both teachers and students. By exploring new ways, educators come up with a better and advanced form of teaching students. This helps in creating engagement and makes learning a fun activity.

**Definition :-** "The definition of digital technology refers to digital devices, systems, and resources that help create, store, and manage data". An important aspect of digital technology is information technology (IT) which refers to the use of computers to process data and information.

- Digitalisation of teacher workplaces and leadership can facilitate teacher engagement and involvement in educational transformation. Some studies explicitly pointed to the added value of engaging teachers in the design and implementation of digital technologies in schools. Clancy and Gardner (2020)
- Fransson et al. (2020) summarise that the main challenges are related to economic financial resources, overcoming initial learning barriers, changing classroom organisation and

management of teaching and learning,teacher competency, trust in own skills and impact on learning content and outcomes. (Fransson et al. 2020)

- The use of online instructional videos in the flipped learning model freed teachers from lectures and enable them to work with individual students in collaborative activities rather than the whole class .(Sun & Gao, 2019, p. 1124)
- Teachers need to be ready, and the success of the use of digital technology cannot rely onand the success of the use of digital technology cannot rely on the enthusiasm of early adopters and their capability to provide collegial support. It was found that teachers' experience with technology, and how to deal with the functionality of technology or devices in classrooms, can be seen as a challenge (Al-Awidi & Aldhafeeri, 2017; )
- Hill & Valdez-Garcia, 2020), impacting their confidence in the uptake of technology as well as their safeguards in teaching learning process.

**Digital classroom:-** Digital classrooms are defined by using electronic devices or platforms such as social media, multimedia, and mobile phones to teach students. With digital technology in education, today's educational landscape has altered for the better or improvements. Digital learning is a learning strategy that employs technology to fulfil the entire curriculum and allows students to learn quickly and rapidly . The digital classroom entirely focuses on teaching via the use of technology. Students use technological or internet-connected gadgets like laptops, tablets, Chromebooks, etc. Instead of taking notes on what the teacher has taught, most of the curriculum is delivered to students online through an engaging and interactive platform. Despite its many facets, education is fundamentally a kind of communication. The internet has resulted in the rise of new communication channels, which have extended the options for the transmission and access to educational information

**Features of digital classroom :-** Educational applications and websites are used in digital classrooms to assist students in improving their learning experience. Feedback loops and technology are two critical components of a digital classroom. Feedback loops are essential for students to obtain real-time feedback from their teachers. Teachers can use feedback loops to provide feedback depending on many factors such as student, lesson, group, etc. PPTs, video presentations, e-learning methods, online training, and other digital approaches are increasingly used in the teaching-learning process As a result, classroom instruction is becoming more participatory. Students may now learn many topics on their own by using internet resources and digital classrooms. In schools, colour charts, graphs, and models describe the finest instruction of the class. However, they are now considered old-fashioned methods of giving education. Education in the classroom is no longer restricted to reading books, writing on the blackboard to explain chapters and concepts, and taking notes in their books.

**Applications of digital technologies in education:-** 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. Thus, it will be up to instructional designers and educationists to use advanced digital technology's potential to revolutionise education such that effective and efficient education is available to everyone and everywhere in education:- Digital technologies is not only a knowledge provider but also a co-creator of information, a mentor, and an assessor. Technological improvements in education have made life easier for students. Instead of using pen and paper, students nowadays use various software and tools to

create presentations and projects. When compared to a stack of notebooks, an iPad is relatively light. When opposed to a weighty book, surfing an E-book is easier. These methods aid in increasing interest in research. This paper is brief about the need for digital technologies in education and discusses major applications and challenges in education. Traditional classroom instructions fall short of providing an immediate learning environment, faster evaluations, and more engagement. In contrast, digital learning tools and technology fill this void. Some of the efficiencies such technologies provide are simply unrivalled by traditional learning methodologies. With smartphones and other wireless technology devices becoming popular among the general public, it only makes sense that schools and educational institutions make efficient use of them by putting technology in the classroom. Indeed, today's technology's adaptability and non-intrusive character make learning more appealing to the next generation. However, it may be a formidable technique to manage initially since traditional instructors are hesitant to include contemporary technology and gadgets in school, viewing them as a distraction rather than an intelligent learning aid . An online classroom calendar, where we may display class schedules, assignment schedules, field excursions, speaker events, examinations schedules, or semester breaks, will help students plan accordingly. Student response systems, such as smartphones and clicker devices, provide a quick and easy technique for teachers to determine students' learning of the presented content quickly and whether more explanation is required.

**Digital technology as the necessity of changing education:-** Advent of PC (personal computers) and extent access to the internet establishes an environment making global education systems obliged to change their education structure in major ways . The duty of educational systems confronting the changes is clear. Its primary purpose should be increasing the human power against changes, i.e. someone can adapt to continuous change, observing the economy, quickly. The more rapid change, the more attention should be paid to recognizing the pattern of future events. To help humans to remove future shock, we should establish a meta-industrial educational system. For this, instead of searching in the past, we should find our purposes and methods in the future. It is obvious that in 21st century the world will be dominated by modern technology and due to rapid scientific, economic, cultural and political changes, the educational systems will not be able to consider themselves as islands separated from the other social and national organisations in the global village. Because education, both in the view of historical empiricism and particular conditions encompassing the 21st century, surely, will be the centre of changes, evolutions and multiplications of the 21st century. Certainly the society doesn't view digital technology only as an economic variable and political lever, but as a possibility for changing education through IT. So one can suppose proposed patterns of digital technology in education as centre on nature of knowledge, functional techniques and a controlling criterion in society.

**Conclusion :-** In today's world education needs modern, moderate and simple technologies in order to meet its needs for its arrival and correct use. Education should perform policies, most important ones are:

1. Expanding human sources of digital technologies through educational programs and promoting skills for increasing work force efficiency in education.
2. Using digital technology for increasing educational institution efficiency for better education accompanying creativity.
3. Supporting digital technology , for example supporting costs related to research and expansion in education .

4. Establishing proper atmosphere and participation morale in education by the use of digital technology . 5. Establishing cooperation and coordination between various parts in the field of using the aforementioned

tools .

6. Expanding the culture of using digital technology through providing and encouraging its consumption in education. In evaluating kinds of information technologies education should consider matters such as need, properties of scientific efficiency, economy and facilities and skill potentials existing in this case.

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