# A STUDY OF DIGITAL TECHNOLOGY AND ITS IMPACT ON INDIAN EDUCATION DURING 21st CENTURY

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## Abstract

The goal of this research is to talk about twenty-first-century technology. It is indeed a technologically advanced era. In today's technologically advanced era use a variety of digital techniques to simplify education. Learners used to access information by enrolling with colleges, teachers, and libraries in traditional education. Handling, exchanging information, teaching methods, learning approaches, scientific research, and accessing information are all areas where information communication technology (ICT) plays an important role in education. The vast development of digital technology in today's world affects all advanced nations. Similarly, India follows the path of developed countries in terms of digital technology. Numerous apps and educational resources are now available to help Indian teachers and students develop effective teaching and learning skills. This article studies the impact of ICT on education, as well as various educational tools and learning apps that may be used in Indian education. This type of education has also been shown to have long-term positive effects on students' perceptions. In the 21st century, this is crucial. This is necessary for this century.

**Keywords**: Digital technology, Education, 21st century, Impact.

## Introduction

In the National Education Policy, the emphasis is on the necessity of students' education for their lives outside of school, rather than just for academic purposes. The Indian education sector requires investments in digital infrastructure, the development of online teaching platforms and tools, virtual labs and digital repositories, and teacher training for the design and implementation of online assessments, students will receive training to become high-quality online content creators. During the pandemic, India's educational system went through a period of self-awareness and learning, to find a quick solution. A solution to the crisis that has arisen as a result of school closures Alternatives to traditional education is being introduced. Will have a long-term positive impact on the country's literacy rate. Students will become more familiar with a digital system. As technology advances, it will become more integrated into our daily lives.

Indian formal education in the twenty-first century was traditional. The focus was on school, especially college. Libraries, newspapers, magazines, and books are used by teachers, students, and the general public to get information. Teachers either followed a textbook or equipped notes based on books and their own experiences when delivering formal education. Students were admitted to colleges and schools that provided formal education. Learners had access to additional resources in the form of libraries. The twenty-first century is a technologically advanced era. People in the technologically advanced era used digital technology to simply educate themselves. Digital technology has already been used in education in developed countries. Today, India is following in its footsteps. It has been proven through research into the economies of developed countries that economic growth is dependent on the use of digital technologies. An economy that lags in computer science and information technology advances. In today's world, technology will never be able to develop. Different educational tools and learning apps are now available in Indian education, but effective implementation of technology methods in the classroom is based on teacher confidence. Positive teacher attitudes toward computers are widely recognized as a prerequisite for effective classroom use of technology (Woodrow, 1992). In today's world, technology plays an important role in daily life. This is because technology makes our jobs much easier and faster.

The twenty-first century is frequently referred to as a technological era. Today, technology plays a critical role in our lives. It is regarded as a foundation for economic growth. In today's world, a technologically deficient economy will never grow. This is since technology makes our jobs much easier and faster. The impact of technology can be felt in almost any field, including education.

**Technology tools used in modern education:**

"Technology is a driving force in education," said Kirsty Kelly, Primary Years Program Coordinator at the Canadian International School in Singapore. "It opens up many doors and prepares students for what lies ahead, not behind." "It comes up differentiation, individualized learning, real-world integration, and a variety of assessments".

According to the most recent research on how modern students prefer to use technology and how technology affects their learning, it was discovered that when students use modern equipment, technology, and tools, their learning and interactivity improve. When technology is used to assist

them, they find it to be much more interactive and full of interesting areas. Knowledge transfer becomes very simple and convenient, as well as very effective. It means that, when assisted by modern technology, our minds now tend to work faster in any aspect of life, including education. Even in schools, universities, and colleges, the reliance and dependence on such an innovation that simply makes life a simple, smooth journey is unavoidable these days. Some common technological tools are used such as:

1. **Digital Interactive Whiteboard:** Connecting an interactive whiteboard to a computer or projector enables it to display large displays on a large display.

2. **Ultra-High-Definition Television (UHDTV)**: A UHDTV's wide-screen display provides images that are clearer and more detailed than a standard HDTV's, and it is capable of freezing video playback to create high-quality still images. They have four times the resolution of HDTVs, making for a more realistic viewing experience. 3D UHDTV is one of the newest and most exciting technologies. It provides a high-quality 3D theatre experience with special viewing glasses.

3. **Smart Boards** - Interactive Classroom Boards: SMART Boards have revolutionized teaching aids and instructional technology with their large, high-definition touchscreen displays. It allows the user to save, print, or email what has been explained to others who cannot attend.

4. **Digital Projectors:** It is useful for presentations at meetings where multiple people need to see the screen at the same time. However, the images displayed can be difficult to see in bright rooms, so they are better used in dark rooms or with curtains.

5. **Online courses** now have become a very common phenomenon. There are some online courses run through swayam by CEC, AICET, UGC, NPTEL, NCERT, IGNOUIIMB, and NITTTR. People wish to take up online courses for their learning and certifications. Online course or degree scenario is more famous among the students and faculty.

**Impact of ICT in education**- In terms of educational factors, ICT benefits education by increasing its relevance and quality. Tinio (2002) claims that information and communication technology (ICT) has a significant impact on education in terms of knowledge obtaining and assimilation for both teachers and students through the promotion of ICT tools aid in the calculation and analysis of information obtained for examination. All of the students' performance reports are being computerized and made easily accessible to the public. Learners

are more engaged as a result of ICT because they can choose what they want to learn at their own pace and work on real-world problems. ICT encourages interaction and cooperation between students and teachers, regardless of their geographical distance. It also allows students to work with people from various cultures and in groups, allowing them to improve their communication skills as well as their global awareness. ICT encourages the manipulation of existing data and the creation of one's knowledge to create a tangible product or meet a specific educational goal. In contrast to the traditional classroom, where the emphasis is placed on a single aspect, ICT promotes an integrative approach to teaching and learning by eliminating the synthetic separation between theory and practice. Student-centered ICT for learning provides useful feedback through a variety of interactive features.

**E-learning** is a learning program that uses an information network (internet, intranet, or extranet) for course delivery, interaction, and/or facilitation. A web-based learning strategy involves using an internet browser, such as the model, blackboard, or internet explorer, to access the Internet.

**Blended Learning:** This is a method of learning that combines classroom and online methods. It is one of the most popular and widely used Internet services (like IRC and E-mail). A website is a collection of interconnected documents, according to Dennis P. Curtin (2002).

**Edmodo**: Lesson sharing, parent communication, and classroom community building are all possible with Edmodo. Mostly used in school education.

**Google Classroom** is a free web service for students. Google Classroom facilitates learning by allowing teachers and students to share files. Post questions about classroom lessons and get answers from the teacher. The teacher can also post-study materials for students to review at home.

**Seesaw:** The creativity tool help students be more creative.

**E-pathshala:** It was launched in November 2015 by the Ministry of Human Resource Development and the National Council for Educational Research and Training. E-pathshala is a massive educational repository that houses resources for teachers, students, parents, researchers, and educators. It is accessible via a variety of platforms, including the web, Android, iOS, and Windows.

**Web-Based Conferencing**: As the name implies, web-based conferencing utilizes the internet to transmit text and graphic, audio, and visual media; it requires the use of a computer equipped with a browser, and communication can be both synchronous and asynchronous.

**Open and Distance Learning:** All of these services made possible by ICT have a significant impact on teacher education. It enables increased participation and interaction. Additionally, it enhances educational quality by facilitating hands-on learning, directed instruction, self-learning, problem-solving, information seeking, analysis, and critical thinking, as well as the ability to communicate, collaborate, and learn.

The use of modern technology has several advantages, such as making learning more exciting, making it possible to use this technology at any time during busy schedules, and developing technological skills, but it also has many disadvantages, such as decreasing one's ability to think critically, decreasing one's ability to write, and increasing one's risk of developing health problems.

**Conclusion:**

The effectiveness of teaching and learning will be improved. Teacher training programs must be well-designed so that today's teachers can learn how to best use ICT in their classrooms. When designing a police force, it is critical to consider both the cost and the long-term consequences. In addition, a firm and steady internet connection is made available.

On the other hand, technology can have both positive and negative effects on education. Teachers and students should take advantage of this in a positive light and eliminate the drawbacks that are preventing many students as well as schools from achieving their full potential in education. As a result, every country must implement a future education system that is more technologically advanced.

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