

## Ed-Tech: Pros and Cons with Future Aspects

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### Abstract:

Many people's cheeks light up when they hear the word technology, especially the younger age. Technology has an impact on how people interact, learn, and think. It contributes to society and influences how individuals interact on a daily basis. In today's world, technology plays a critical role. It has both beneficial and bad repercussions on the planet, as well as a direct impact on people's lives. We live in a time where technical advancements are commonplace. Technology has had a significant influence on our lives in a variety of ways. It should come as no surprise that technology has made and continues to make significant inroads into the educational profession. This is especially true for the tech-savvy generation. With rows of pupils seated and listening, the teacher continues to talk from the front. Classrooms aren't much different, either. Except that today's kids are seated with tablets, computers, or smart phones (most likely open to Facebook or WhatsApp!). So, to put it sarcastically, technology has had little impact on schooling. However, technology has altered the way education is delivered today. Today's students, parents, and educators have access to a wide range of learning resources. A massive collection of electronic material is available on the World Wide Web (books, audio, videos, images, notes)

**Key Words:**Technology, Technology in Education, Positive & Negative Effect of Technology in Education, Future of Technology in Education

### Introduction:

The technical discoveries, inventions, and engineering applications utilised inside society to complete specific jobs have both aided and hampered ancient and modern human civilizations. Technological advancements have become required for societies to exist and grow, but human societies' culture, goals, and ambitions have affected how those civilizations have generated, profited from, and been hampered by technology. Human societies/civilizations and their technology have grown interwoven since technical systems are produced by people and reflect the very core of a population's needs and culture. The cyclical nature of society and technology is one in which one aspect has a significant impact on the other, beginning with human societies and ending with the development of various technologies to satisfy the society's demands. These technologies alter how societies behave and work, which has an impact on and evolution of their economy, culminating in a cycle of increased need for more technology.

Life has become better in the previous several decades as technology has advanced at a breakneck pace. It's difficult to fathom living without technology, which includes the Internet, phones, tablets, television, PlayStation, and movie and video games. While many people value technology's beneficial aspects, they overlook the numerous detrimental consequences it has had on society as a whole. One might quickly conclude that such

technological tools have improved human lives by allowing people to learn about other civilizations, meet with different people on a global scale, preserve or reinforce familial relationships, stay connected to the rest of society, and assist individuals in becoming socially adept. Nonetheless, some of these technical characteristics contribute to societal stress and isolation. Technology, it appears, has had a logical influence on the concept of "social."

In light of this, the impact of a new future due to multitasking and a short-term perspective will be harmful, since societal incentives for deep participation would gradually fade away. Without a doubt, technology has altered the way instructors educate in the classroom. Since its inception, several efforts have been directed at assisting educators and the various methods for applying it in the classroom. They were concerned about the proliferation of technology such as laptops, portable devices, computers, digital movies, and video material into the classroom.

There has never been a time when a single piece of technology, even a failing piece of technology, had no influence on human civilization. Because "necessity is the mother of innovation," every invented technology was produced to satisfy the demands of a civilization and is thus inextricably linked to the culture and habits of the people who inhabit it.

The twenty-first century is frequently referred to as the "technological era." Technology plays a significant part in our daily lives in this generation. The widespread adoption of technology is having a favourable impact on many aspects of society, including education. Students of today have access to not just mobile phones and computers, but also the internet and educational software to aid them with their studies.

As a result, the article discusses the notion of technology-driven education, the resources used in it, the variables that influence adoption, the social effect of technology-driven education, and recommendations for strengthening the positive social impact of technology-driven education.

### **What is Technology?**

Any application that is built or constructed utilising applied science/math to solve a problem in society is referred to as technology. Agricultural technology, such as those used by ancient civilizations, or computing technologies used more recently are examples of this. Calculators, compass, calendars, batteries, ships, and chariots are examples of ancient technology, whereas computers, robots, tablets, printers, and fax machines are examples of modern technology. Sophisticated Blockchain technologies, smart cities, more advanced smart gadgets, quantum computers, quantum encryption, and advanced Artificial Intelligence are all examples of future technology.

### **What Impact Has Technology Had on Human Life?**

Finally, technology has had a positive impact on human life from antiquity to the present by resolving obstacles in everyday life and making many jobs easier to do. Technology has made it simpler to farm, build cities, and travel, among other things, effectively connecting all countries on the planet, assisting in the creation of globalisation, and making it easier for economies to flourish and businesses to conduct business. Using technology solutions, virtually every aspect of human existence may be made simpler, more effective, and faster, resulting in fewer issues in one direction and more problems in the other.

### **Effect of Technology on Education:**

The twenty-first century is sometimes referred to as the "technology era," and the people who live in it are known as "digital natives." In today's context, no educational system can climb beyond a country's technical achievement, hence technology is considered as a foundation for educational development (Raja & Nagasubramani, 2018). Technology is the practical application of scientific concepts to a variety of challenges, including educational issues. Education refers to the processes of teaching and learning that result in beneficial changes in learners' behaviour. The worldwide education system has undergone significant changes as a result of technological advancements. Technology has ushered in a revolutionary, rather than evolutionary, transformation that impacts all stakeholders - kids, instructors, administrators, parents, employers, and citizens (Jolls, 2008). Without a doubt, the use of technology boosted the efficacy and efficiency of education delivery. As a result of the use of technology in curriculum design, teaching, and learning processes, the 21st century education system is considered to be technology-driven. According to Tripathi (2018), increased access to smartphones, the creation of technology-based learning apps, advancements in artificial intelligence (AI), and the constant evolution of virtual/mixed/augmented reality technologies are some of the drivers pushing technology in education (Emmag, 2019).

The way we live has unquestionably altered as a result of technological advancements. Schools are increasingly focusing on improving the technology they utilise in the classroom. Different forms of technology are employed by pupils in the classroom, and this has a significant influence on the global education system. Nearly 10 years ago, the blackboard was regarded as an essential teaching instrument; teachers used to perform numerous exercises with the aid of chalkboards. As time passed, whiteboards took their place, and now it's all about smart boards. Smartboards are quite modern, and they provide students with a variety of innovative teaching and information sharing options. Smartboards have reduced instructors' job stress since they can simply keep all of their data on them and teach their pupils more effectively.

Previously, books were thought to be the only source of information for gaining knowledge or studying for an upcoming exam, but now it's all about innovative education apps. Students have obviously said their goodbyes to textbooks and embraced the new educational applications with open arms. Every day, new educational applications are released on Google Play and the App Store, and they are downloaded by thousands of students. You can easily locate apps for various courses and put your worries to rest.

In today's society, these are some of the implications of technology on education (Emmag, 2019).

- **Information is readily available:**

The Internet is the world's largest database of information. It is one of the most effective methods for learning. Students need merely type their questions into a search engine, and the internet will respond with hundreds of results. This would not have been feasible without technology. There are a number of educational websites where students and instructors may learn about a variety of topics.

- **eBooks:**

One of the most significant effects of technology on education is online learning. Students will no longer need to travel to bookshops to look for books since they will be able to obtain any book with only one click. There are countless eBooks and library apps accessible from which students may obtain any book at any time and study a variety of subjects such as math, statistics, physics, biology, chemistry, and so on.

- **Keeping in touch:**

Students may communicate with their professors at any time using a variety of mobile applications and the internet. With the use of numerous educational applications, students may ask their professors questions at any time.

- **Learning in a new way:**

With the technological transformation in the educational industry, the old technique of learning has entirely transformed. With the emergence of numerous mobile applications, students all around the world have devised new learning techniques. Instead of school textbooks, pupils nowadays choose to study via eBooks and video lectures.

### **Roles of educators are changing**

Educators' instructional capabilities have not only altered, but have massively grown and are continually developing as a result of technological advancements. Teachers nowadays are privileged in that they may access large amounts of electronic material on the internet for both study and instruction with the click of a mouse. Teachers' duties have shifted from 'Instructors' to 'Facilitators' as a result of these advancements. Today's dedicated instructors have no choice but to be well-versed in current and evolving technology. Because of technology improvements, the learning environment is dynamic both offline and online. As a result, there is an increasing demand for instructors who are knowledgeable about both present and future technologies. Teachers may use technology to help them create better lessons. Teachers may use technology to help them create educational materials and enable new modes of learning. This is the new era of anytime, everywhere education, thanks to the Internet's worldwide reach and smart device connectivity. Educators and educational institutions should take use of these possibilities to the fullest extent possible. Schools and colleges are currently rebuilding their learning environments to accommodate this new form of education, which emphasises the use of technology. Because of technological advancements, the worldwide student community now collaborates and coordinates more effectively (Nair T.2018).

### **Education Technology Project in India:**

The Ministry of Education and Social Welfare of the Government of India recognised the relevance of education technology for quality enhancement and included the Education Technology Project in its Fifth Five Year Plan in 1971. The following were the four sub-schemes for this project:

1. Creating an Education Technology Unit under the Ministry of Education and Social Welfare.

2. Creating a Centre for Education Technology (CET) inside the NCERT.
3. Assisting States in fully establishing Education Technology Cells and programmes.
4. Increasing the capacity of a select educational institutions to carry out Education Technology Programs.

As a result, a unit was established in the Ministry in 1971, and a CET was established at the NCERT in 1973. From 1972 to 1973, some states establish Education Technology Cells (Mohanty J., 2004).

The Ministry's Unit was in charge of all planning, policy-making, and funding for the educational initiative, and the NCERT's CET began operations in the following areas:

- Designing and implementing systems.
- Prototype manufacturing of appropriate hardware and software.
- Training on several aspects of educational technology.
- Evaluation and research
- Information, statistics, and consulting services are collected and disseminated.

The Education Technology project was designed as a broad-based and collaborative endeavour including the Ministries of Education and Social Welfare, Information and Broadcasting, the Indian Space Research Organisation, and other interested parties. Inter-agency coordination, methodical planning, scientific assessment, and effective usage are all stressed. In terms of operation, the initiative aimed to provide the benefits of technology to huge groups of people, particularly those living in rural regions. It intended to raise educational quality at all levels, decrease waste and stagnation, and bring new teaching methods and innovation (Goswami.C., 2014).

### **Challenges of use of Education Technology in India:**

Despite its early use of technology in the educational sector, India is currently experiencing teething problems with new educational technologies. Here are a few examples:

- In educational institutions, there is insufficient or limited access to computer gear and software.
- Lack of time in the educational calendar for technology-based initiatives
- Insufficient technological assistance for educational institutions
- There are insufficient possibilities for teacher training
- There is a lack of information about how to incorporate technology into the curriculum
- Education technology integration is not a priority.
- At home, students and teachers lack access to the required technologies.

### **Positive influence of Technology on society:**

- **Education Benefits from Technology**

Many more people and professions have profited from technology than simply the corporate industry. One underappreciated effect of technological advancements in recent decades is the impact on education. Listed below are a few examples:

- **Online courses are available** - Not everyone has the financial means to attend college. Many people who would like to further their education are unable to do so because they are employed, caring for families, or live too far away from their local institution to travel. All of that has altered thanks to online programmes. Students may now enrol in online programmes or take single classes at their leisure, without having to leave their homes.
- **Students and professionals alike can benefit from seminars;** yet, they may be unable to attend because they live too far away, lack transportation, or are unable to schedule around the lecture in order to arrive on time. Schools might not be able to afford to take their pupils to a lecture during the school day. Web seminars allow them to watch the session live from the comfort of their own home or school. NASA, for example, offers a programme where students may attend a webinar with astronauts in orbit from the comfort of their own classroom. Students can not only observe and listen to what the topic has to say during a webinar, but also ask questions and engage with them.
- **The capacity to research any topic** - Prior to the Internet, you would have to perform your research in a library. Even so, there's a chance the library didn't have the books you required. Then you'd have to go to the library and request the books, which may take some time. Research was time-consuming and inconvenient. You may get information on any topic you can think of using the Internet. You'll have no issue locating various sources to double-check the accuracy of the information you get.

#### **Negative influence of Technology on society:**

- **Students' originality is suffocated by technology**  
Although the readily available knowledge on the internet is an excellent learning tool, it may also destroy students' originality. To get good scores, most students just copy and paste material from the internet. This is arguably the most important reason why we have graduates that are outstanding on paper but lack in-depth understanding of their chosen profession; these graduate students, although having a degree, are unable to address any technical challenges. This is without a doubt one of the most tragic detrimental effects of technology on pupils.
- **Distractions:**  
Students spend limitless hours on the internet, surfing social networking sites, and watching television shows instead of dedicating a regular amount of time to academics. Students nowadays are addicted to social media, preferring to spend their time on Facebook and Instagram rather than concentrating on their studies.  
As we all know, addiction to anything may stifle a student's mental development, and it's not a good idea to bind yourself to anything that isn't beneficial. Rather of wasting valuable years of their lives on social networking apps, kids should strive to focus on their studies and create a brighter future for themselves.

- **Misinformation:**

Despite the fact that the internet is a treasure trove of knowledge, there is no assurance that all of the material provided is 100 percent correct. People have the freedom to put anything and anything on the internet, and every piece of information can be used to mislead pupils, resulting in a negative impact on their career.

There are however some disadvantages to using modern technology in teaching. With the employment of cutting-edge technology in education, a slew of ethical dilemmas and issues develop(Goswami.C.,2014).

- **The Copy and Paste Syndrome**– Schools and universities are increasingly concerned about students who use content from websites or blogs to prepare essays, projects, or presentations. Students frequently copy and paste chunks of material that appear to be important, sometimes without even understanding them, let alone citing them.
- **Distortion of reality** - When students go to a website to hunt for information, they frequently use a search engine. This will provide them with a ranked list of frequently voluminous search results.The website, and the fact that someone with enough money may influence what is published or rated, pose a significant threat to their perception of reality.
- **Putting too much faith in the information found** - When seeking for information on the internet, students often take what they find as accurate information without checking additional sources, leaving them with little reason to accept the material at face value.
- **Loss of privacy and profiling** - It is evident to us that when students utilise services offered through websites, they are frequently disclosing information about themselves to the service providers. When a firm offers a variety of services, the problem becomes much more difficult, since integrating all of the information that may be gathered results in a very thorough profile. There is little question that certain businesses are compiling data or profiles about their customers, as well as economic data. This can be accomplished by stealth, as mentioned, or through open social networks, where many people share information that could be damaging to them in the future.

### **Future of Technology in Education**

While many state governments and private sector efforts in India appear to be taking education technology seriously, the majority of these programmes are targeted at preparing students for the job market.

Furthermore, the programmes are software-acentric, emphasising the acquisition of a specific set of software tools. It is critical to de-mystify this technology and to de-emphasize the acquisition of certain tools. A well-balanced general education programme is required, with computers consigned to their proper role as instruments that broaden the perspectives of other topics.To enable technology in India, computer-based learning systems must be implemented from the primary school level, so that students become computer literate at an early age and are not scared to use Education Technology when it is required(Goswami.C.,20

### **Conclusion:**

Technology can help students focus on more vital information collecting processes by reducing the amount of work they put in to collect a large number of printed books and magazines. Technology, on the other hand, may depict education in ways that aid pupils in comprehending current concepts and ideas. Teachers can also use education technology to include project-based learning. Students at all levels may utilise these tools to create knowledge and develop abilities needed in modern society, such as presentation and analytical skills, with the help of excellent teachers.

In today's classroom, the teacher's job is that of a facilitator. The instructor must make learning easier for kids by allowing them to use technology. Teachers can identify ways to engage kids in learning more readily and to meet the requirements of a variety of pupils. Finally, we can conclude that technology is both the light and the shadow for the modern world; how we utilize or misuse it is entirely up to us.

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