



## Addressing the Issues regarding Applications of Technology in Teaching-Learning Process

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**Abstract:** *The development of society and nation is based on education. In India, in the ancient, medieval, and modern eras, the system of education and teaching-learning process has existed in a different form. Education is the basic need of human beings that is why education is recognized as an essential requirement and a fundamental right in the Constitution of India after independence. Teaching is an ancient and Nobel profession, but a look at the modern school system from the ancient madrassas shows that dramatic changes have taken place in the education system. Man has gone through different periods from pen and paper to the explosion of digital devices and information and communication technology. The invention of these technologies has brought the whole world into a coma, especially during Covid-19, when human life was badly affected and the educational streams were cut off for an indefinite period. In such a situation, by implementing the online education system, an attempt was made to save the children from educational harm to a great extent and of course, it was successful. However, as fast as the landscape of the country and the world has changed, teachers and students or countries have not been able to prepare themselves for this change. That is why there are many problems with the application of digital devices and technology in the online education system, such as lack of digital devices, lack of skills in teachers, lack of technology and its use, connection and network problems, unfamiliarity, fear, and lack of confidence in the use of modern equipment, etc. The following article discusses these issues and offers some important suggestions.*

**Key Words:** *Technology, Teaching-learning process, Issues and challenges.*

### 1. INTRODUCTION:

Education is not just the name of teaching, it is a process by which the nation itself gains awareness. Education creates awareness in the new generation about the ways of life and the purpose and duties of life. Through education, a nation transmits its cultural heritage from one generation to another. As stated by the Board “education is a means of individual and social reform”. According to John Dewey “education is the development of all the abilities of the individual through which he acquires the ability to control his environment”. Under the provisions of the Constitution of India, education has been declared a fundamental right, especially for children aged 6-14 years. Education in India is provided by the government and the private sector and is overseen at three levels: central government, State government, and regional government. Education is a developing process. It rapidly absorbs the revolutions taking place in the world and the changes taking place in the society and then tries to adapt its entire system accordingly. That is why the education system in India has changed from a Grukul system and a tree to a classroom and then to a smart classroom. The only nations in the world today that is reaching the highest levels of development are those that are adapting to the rapidly changing conditions and creating their unique path. In such a situation, our country also needs further changes in its education system.

### 2. Teaching- Learning Process:

According to Admiral Amidon “teaching refers to the process that takes place between the teacher and the student in the classroom”. Education is the place of the spinal cord in the body, just as the spinal cord maintains the structure of the body, so teaching plays an important role in making the education process effective. Teaching is related to the development of the child’s holistic personality. Therefore, a teacher must pay attention to the full development of the child’s mental, physical, emotional, social, moral, and spiritual abilities. According to Clark, teaching involves all the educational and organizational activities that lead to a change in a student’s character. Similarly, the acquisition is a life-long process full of experiences. Teaching and learning are two interdependent concepts, or in other words, two



sides of the same coin. Teaching is a profession that involves a variety of skills, so the best training and skill development is needed to make the teaching process a success. And in today's world, these professions require more hard work and dedication as the landscape of the whole world and of our country itself is changing rapidly which is having a direct impact on our education system. To make the teaching and learning process effective in such situations, our educators and the educational administration must adapt to the changing times and circumstances.

### **3. Meaning and Concept of Technology:**

The word "Technology" is derived from the Greek word "technique" Which means 'art' or 'craft'. And "logia" means 'science' or 'study'. Its use in mechanical science and industrial arts began in 1959. The definition of technology can be defined as the research study or rate of a mechanical science or an art. Technology covers both science and engineering and specifically, discusses the tools, materials, objects, equipment, and machines that play an important role in human development. Technology refers to the combination of knowledge that helps a person move towards a better environment, a healthier and happier life, and above all a more comfortable life. Technology is a combination of techniques and knowledge that when applied systematically and logically by human beings and considers better alternatives and as a result, various inventions emerge.

### **4. Use of Technology in Teaching-learning Process:**

Today is the age of computers and the internet and we are living in a technological world where information and communication technology is the basis of almost all activities related to human life. In the field of education, information and communication technology refers to all the tools, instruments, and resources that are used to achieve educational goals as well as to make the education system more efficient and effective. Given the changes in the environment and society, we have seen changes in the nature and method of education and the school system and curriculum. Today, if we want our country to develop and to be able to keep pace with the developed world and to represent itself in the global economy, it needs change in the school curriculum, classroom environment, teacher's role, teaching methods, the principle of evaluation and whole education system. Today is the age of technology in education so the importance of ICT and technology in the teaching and learning process is obvious. It is a valuable asset for students and teachers through which the teaching process can be made efficient and the acquisition process meaningful and interesting. There is no denying the need and importance of this in any educational institution. Knowledge of the information and transmission technology is must for every teacher in the present age and they are expected to not only acquire knowledge of modern information and transmission technology but also use it to make their teaching-learning process meaningful. Research has shown that the proper use of ICT must bring about changes in both materials and pedagogy in line with 21<sup>st</sup>-century education if these technologies are properly incorporated into the teaching and learning process.

### **5. Objective**

1. To address the Issues regarding applications of technology in the teaching-learning process
2. To find out some significant solutions to overcome the issues regarding the applications of technology in the teaching-learning process

### **6. Research Method:**

A conceptual research method was used by the researcher

#### **6.1 Issues regarding applications of technology in the teaching-learning**

The importance of the use of digital devices and technology in education is evident in today's world. However, research shows that in the last two to three years, during the teaching and learning process, several issues have emerged regarding the use of digital devices and applications. To address the Issues regarding applications of technology in the teaching-learning process the details of which are given in the following lines.

#### **6.2 Teachers' Related Issues:**

Teachers were the center of traditional education or ancient education. The entire task of teaching was on their shoulders, but nowadays the modern education system has drastically changed the role of teachers. Students can carry out the journey of acquiring knowledge on their own. In this changing scenario of teaching and learning, change in the attitudes, talents, and skills of teachers is very important. Teachers need to prepare themselves to learn technology-integrated learning, innovative teaching methods. But in the last few years, especially during and after the pandemic, the pace has changed so rapidly that teachers have not been able to adapt to the changing times and circumstances. And



the proof is that even today, a significant number of teachers are unable to make the best use of digital devices and technologies in the teaching and learning process. One of the reasons for the decline in teacher skills may be the tendency of teachers to acquire new teaching skills after a certain age. Lack of resources and equipment with teachers is also a major problem in the use of digital devices in the teaching and learning process. At the same time, a major obstacle is a poor internet and lack of connection, and this problem is faced by almost all developing countries.

### **6.3 Students' Related Issues:**

During the lockdown, the world moved to online mode with lightning speed. According to some observers, this is the heyday of the digital world. But the sudden epidemic proved to be a challenge for developing countries challenges. But most of the private educational institutions succeeded in this struggle. Government agencies failed miserably despite ample budgets. The government did run educational channels, but ensuring access to students and mentors proved difficult for them. The immediate implementation of online classes has psychologically affected teachers, students, and mentors alike. Learning online during self-imposed loneliness when the teacher's voice is not heard, communication is frequently cut off and it is difficult to ask them again, is detrimental to education as well as psychological. It also increases stress. (Waheed Ahmed, 2020)

Lack of access to computers, laptops smartphones, and the internet for underprivileged children in remote areas of cities is a major problem. In most parts of India, excellent network services are missing. Economically weaker families couldn't provide all these expensive facilities to their children. Similarly, lack of awareness about the use of online systems and devices proved to be a major problem for students and teachers. Numerous studies have shown that students and children are suffering from various mental, physical, social, and psychological problems due to their increasing connection with the Internet and digital devices. Experts believe that the Internet is also a major cause of child sexual abuse in modern times. According to a 2014 report by the London School of Economics, 57% of children view pornography on the Internet, but only 16% of parents are aware of it. A 2017 UNICEF report, Children in the Digital World, states that every third user of the Internet is a child, but no special arrangements have been made to provide children with safe online content. The blue light emitted from the screen shortens' sleep duration, leading to an increased risk of depression, obesity, and cancer. And memory is being negatively affected. According to research, excessive use of digital devices can cause muscle, neck, joint pain, and mental retardation in children. At the same time, Nomophobia is emerging as a global epidemic. According to the scientific journal International Cardiology, spending too much time of children with internet is causing high blood pressure.

### **6.4 Parents related issues:**

During online teaching, the school administration and teachers have been complaining about the level of negligence on the part of children and parents. There is a big difference between online teaching and physical teaching. Such a large-scale online teaching experience was conducted for the first time in the world from primary to higher levels during and after the pandemic, and it was so sudden that it shook not only governments and the education system but also students and guardians. Put it, however, the development of online teaching skills is education itself. However, the parents also faced many problems in this regard. The biggest problem is the lack of resources. If there are many children in the house and their classes are going on together then providing devices to each child may not be a big problem for some guardians but the backward and middle class are worried about it. Another important problem is a strong network. Despite all the resources available in our country, network problems can occur anytime and anywhere all connections can be disconnected. The third major problem is the lack of familiarity between the heads and the digital devices. Because parents are not able to learn as fast as children are learning about these devices today and are often unable to guide students in educational aspects. It should be noted that the introduction of the online education system has resulted in equal participation of teachers as well as parents and guardians in the teaching and learning process in which the biggest problem for parents is the classroom environment at home. How to create? Parents also become victims of conflict and mental confusion.

### **6.5 Some significant suggestions to address the Issues**

In keeping with the current curriculum, students' acquiring abilities, and interests, teachers need to not only create content but also ensure their online delivery. To ensure that information and materials are made available to students in the form of PowerPoint, E-Books, videos, online quizzes, it is important that teachers themselves are not only familiar with the digital device and educational technology but also have the skills to use it smartly. It is the responsibility of the administration and the institutions to manage the training of the staff, provide basic facilities and resources to the staff if they want to maintain the quality of education of their school and children and protect them from educational harm. Net packages to reduce the financial burden on teachers, staff to use digital technology i.e. screen



sharing and WhatsApp and broadcast groups to be created, reporting to be on excel sheet, syllabus to be planned, examination system and the entire education system should be organized online so that maximum educational and teaching results can be achieved in less time and fewer expenses only. Online classes should be run on the same protocol as offline classes. There should be a general assembly, there should be etiquette of entering the classroom, and the screen should be shared and written with a virtual pen.

Online teaching will be beneficial and interesting if teachers accept the integration of technology in education and the teaching-learning process. This requires the use of online platforms such as Zoom, Google meet, Microsoft Team, WebEx, and many other Internet-connected applications. Nowadays parents are an important link in the education system. Some of them are aware of the requirements of the situation and are also concerned for the children's academic life, while some parents are quite the opposite, all these guardians should be counseled separately, online meetings with parents can also be held and their appropriate strategies can be developed in light of the experiences and feedback. Likewise, teachers and guardians have a responsibility to protect their children from the misuse of the Internet, to make them aware of the proper use of digital devices, and to ensure that students use these devices to achieve maximum educational goals. It must be ensured that the use of devices and its interval should be determined according to the age and educational needs of the children. Only by adhering to these principles can the goals of all-around development of the personality of the students be better achieved and the standard of education be raised which enables our country to be represented in the field of economics and development globally.

## 7. CONCLUSION:

It is a well-known saying that knowledge is a treasure that cannot be hidden, the practical proof of which came to light in the year 2020 in the Pandemic era. March 22, 2020, is a crucial day in our recent history when educational institutions across the country were abruptly shut down on just four hours' notice. Within a week, many educational institutions started offering online education while most of them failed to make the required progress in this regard. In such a short period, this big change was not easy. Fell down These conditions led to a great revolution in the education system, both in terms of resources and tools and in terms of content and methods. Volume books have been turned into e-books, whiteboards have been replaced by tablet screens, project files have been moved to the Google classroom, and experiments in the classroom have taken place on online platforms. And the efforts made by teachers, mentors, and institutions in this regard are commendable, but some issues need to be addressed.

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