



# The Pandemic Opens the Door: Preparing e -Teachers for Technology Integration

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## **Abstract:**

Teachers need assistance in making connections between learning theories and instructional practices. Moreover, to facilitate this technology integration, faculty barriers must be overcome. Many teachers feel unprepared themselves to use technology. They lack time to learn about and incorporate new technology applications into their programmes. They need ongoing training and support. Likewise, subject area faculty should be convinced that they are a part of the teacher training process and must act as models of quality technology integration. Ultimately, there is a growing necessity for new teachers to be technology literate and teacher must be ready to meet these demands of the twenty-first century. This paper aims to highlight the importance of role of technology and to prepare teachers to integrate technology in various online study environments.

**Key words:** e- teacher, Technology, Integration.

## **Introduction:**

This pandemic opens the door to new technology in education. Educational technology can provide vital support to the teachers and students. It is important that new teachers be familiar with the potential uses of technology. This may be accomplished by providing opportunities to learn from and use telecommunication technology in teacher preparation programmes. Since contemporary children are generally proficient using computers and internet. Educators are wise to consider going beyond the traditional methods and materials of instruction in an effort to meet their students' needs and interest. Ultimately there is a growing necessity for e-teachers to be technology literate and education programmes must be ready to meet these demands of the twenty-first century. It is important that new teachers be familiar with the potential uses of technology. Technology can reshape the future of education in big ways forming new bonds between students and teachers and with students and the entire learning experience.

There are some difficulties felt in the implementation of the change process in the education system that has been arisen after COVID-19 crisis; these difficulties are related with the novel perspectives of online education and their technological complexities. Earlier to this pandemic, online education is considered as the education provided by the open universities in India. But in COVID-19 induced time, online teaching-learning became a massive challenge to deal with, and stakeholders are not potentially fit to adjust with the sudden educational change as they are not technologically competent to embrace the current situation.

Therefore, for successful implementation of educational change (in this case, it refers to the shift from traditional teaching-learning methods to online teaching-learning methods), implications of change need to be addressed.

### Objectives:

- To bring various forms of online teaching-Learning modes adopted during covid-19
- To became aware of teachers on online teaching during covid-19
- To assess the challenges faced by the teachers in adapting to the online teaching process during covid-19.

**Concept of Online - Teaching :** Teaching online is preparing some materials for online teaching ,requires faculty to devote much more time to the preparation of study materials than they would be do a face to face classroom presentation. Wilson et al., 2004 specified that teachers are expected to perform in online teaching; provide syllabi, instructional resources communication tools and learning strategies, monitor and asses learning and provide feedback, remediation and grades: identify and resolve instructional, interpersonal and technical problems and create a learning community in which learners feel safe and connected and believe their contributions are valid. Most academic faculty are not well equipped to guide students in developing the digital competencies they need. Individual academic faculty operating in a digital environment without any training or support and without adequate resources are likely to become disenchanted with both the product and the process and this reaction might naturally extend to their students. The distributed teaching responsibility characterizes now a day's also comprehensive online teaching both in distance and in campus-based education. Academics who teach online are frequently required to collaborate in a team framework with tutors, editors, instructional designers, computer experts, graphic production personnel in developing and delivering their courses. An additional important reason explaining the reluctance of many academics to engage in online teaching relates to the fact that to design study programmes for online teaching constitutes a complicated and demonstrating task.

### Challenges in Teacher Preparation:

In all over the world the teaching profession has met the challenges in professional and ethical manner. Teachers from all over the world have been discussing challenges, sharing digital teaching experiences. Many countries are shifting to distance learning approaches, whether through distributing physical packets of materials for students or through using technology to facilitate online learning. We know that some students who use ed-tech during the pandemic will have a poor experience because they're not used to it. Some people will say, "During the virus we tried the ed-tech-enabled learning approaches, it was terrible, and looks at my test scores." Yes, this will happen. People's test scores will be impacted. Over the last decade or so, progress has been made in the number of students who have access to devices and connectivity, making this move to online learning possible. Atthesamtime,not every child has access to digital devices or internet connectivity at home, and we need to ensure those kids get access to learning resources as well.

The biggest challenges to using technology in the teacher preparation there are essential instructional components common to both such as context analysis, behavioural objectives, selection of materials and

activities, monitoring student learning and assessment. In order to effectively balance technology with teaching, researchers suggest it is advisable to follow these guidelines.

- Be prepared! Materials, aids and strategies need to be carefully considered for activities within and among the sites. Determine that necessary materials are readily available because a lull in the lesson while the teacher searches for materials will cause students to become inattentive and distracted by the camera.
- Immediately establish a rapport among all the students and teachers. Ask the students to introduce themselves and share some pertinent information so that everyone can remember their names by association. Teachers need to refer to the students by name and not by location in order to create a cohesive class environment.
- Use a variety of techniques throughout the lesson. Respond to learning styles by using a balance of print and visual aids with concise verbal instruction. When using written materials concise with large print. Use black pens on white boards because colours are difficult to see at the remote site.
- Provide interactive opportunities not just with the instructor but also with the other students at all sites. Cooperative learning techniques are effective by encouraging the students within their sites to talk and participate with each other and then share their findings with the students at the remote site.
- Feedback maintains motivation and corrects misconceptions as well as monitors students learning. Continuously check the students at the remote sites by asking them to repeat concepts or answer questions.
- Use both summarisation and closure techniques to continuously review the key points of the lesson. The voice is a powerful instructional tool so precise enunciation and articulation are essential and its need to be monitored. It is not necessary to scream, but speaking too softly will make it difficult for the students at the distant site to hear.

### **Competencies of Online Teaching:**

Information technology can be integrated into both online and classroom settings but the interaction between these technologies and new approaches to learning and instruction may vary. The range of activities available in online settings and the multiple conditions of time in which they take place are evidence that the technology demands placed on online teachers are somewhat more significant than those associated with classroom teachers. Much of what has focused on technical skills and requirements of successfully moderating and facilitating online discussions and chat sessions.

An effective online moderator requires training and that there are competencies unique to online environments. In online asynchronous discussions, the moderator's competencies involve

- Allowing learners time for reflection,
- Keeping discussions alive and on a productive path, and
- Archiving and organising discussions to be used in subsequent lessons.

To develop competencies for online teachers is not without challenge. Competencies are dynamic in nature and they largely depend on the relevant social context. The constant transformation of IT makes the development of competencies for online teachers a continuous process and demands continuing professional preparation and training for online teacher. Such endeavours will improve our ability to make effective use of technology in learning and instruction.

## How to integrate Technology :

Integrating technology means there is a need of computer tablets, software/apps, and internet access and more. Technology can create pathways for differentiated instruction to meet the unique needs of students as individual learners within a broader classroom climate. Technology is an opportunity for teachers to differentiate instruction to modify information for the appropriate learning capabilities of their students. The journey begins from the collective vision of UGC and MHRD (*supra-system*), University and Colleges (*system*), and different academic departments (*sub-system*) in favour of implementing online teaching-learning in the education system.

In the crisis COVID-19 the vision of education system realized that during the pandemic period, teachers and students are motivated to adapt online teaching-learning platforms in fulfilling the current educational needs. Everyone should be skilled in using social media app viz. WhatsApp, Facebook, Twitter, Instagram, which turned into smooth facilitation of using online educational platforms such as ZOOM, Cisco WebEx, Google Meet etc. It gives a positive transfer of learning. And there are some useful educational apps such as Office 365, Google classroom and much more videoconferencing app that can be downloaded free of cost and easy to use in some extent, so there is no reason to get into a panic. Majority of stakeholders possessed smart phones and only considerable numbers having laptops are the needed resources to implement online teaching-learning.

Teachers developed their action plans for online teaching that were a little bit different from teacher to teacher. Most of the teachers started with preparing study e-materials as per the syllabus, taking online classes as per time table, after taking online classes, study materials being uploaded by them. Few teachers have recorded their video lectures and uploaded to WhatsApp group and on LMS portal for those who missed the classes due to some unavoidable circumstances as well as providing equal opportunity to access learning. Some teachers reported that they prepared modules on each unit, what they need to teach. After uploading of that module, they took online classes which were more of clearing their doubts.

## Tech tools to integrate today in Education :

Technology tools have been created with the purpose of giving autonomy to the student improving the academic and administration process encouraging collaboration and facilitating communication between teachers and learners.

- **Edmodo** : It is an educational tool that connects teachers and students and here teacher can create online collaborative groups measure student performance and other functions.
- **Animoto** : It allows you to create high-quality videos in a short time and from any mobile device, inspiring students and helping to improve academic lessons. It is like a friendly and practical allowing teachers to create audiovisual content that can adapt to educational needs.
- **Kahoot** : Through this tool teacher can create questionnaire, discussions, surveys. Promotes game-based learning which increases student engagement and create dynamic social & fun education environment.
- **Padlet** : It is an online bulletin board that can be used many different ways. It is free to sign up. However, we can only make three Padlets before we need to upgrade to a monthly or yearly subscription. Teachers can get a 30-day free trial before upgrading to the monthly or annual. Padlet has taken this strategy to a whole new level, and, like Kahoot!, requires very little teacher maintenance. After creating a free account for themselves, teachers can create digital post-it boards where students respond, vote, inquire, etc. to a prompt or idea with virtual (no paper required) sticky

notes. Teachers simply share the URL for their Pad let, or embed it on a webpage, and it becomes instantly available for student response.

- **Flip grid** : It is a website that allows teachers to create "grids" to facilitate video discussions. Each grid is like a message board where teachers can pose questions, called "topics," and their students can post video responses that appear in a tiled grid display.
- **Popplet** : It is a mind-mapping application and graphic organizer that helps students think and learn visually. With Popplet learners can capture facts, thoughts, ideas in different ways and immediately connect and visualize the relationships between them.
- **Epic**: It is the children's digital library for kids 12 and under, offering access to over 40,000 high-quality books for kids, learning videos, reading quizzes and more. It's an unlimited reading library your child can take anywhere! Epic is the leading digital reading platform—built on a collection of 40,000+ popular, high-quality books from 250+ of the world's best publishers.
- **Edpuzzle** : It is a web-based interactive video and formative assessment tool that lets users crop existing online videos and add content to target specific learning objectives.
- **Mentimetre** : It is an easy-to-use presentation software used by more than 25 million people. With Mentimetre we can create fun and interactive presentations. It helps to make our events, presentations, lectures, and workshops innovative and memorable.
- **Render forest**: offers you the best online branding tools to create high-quality videos, logos, mock-ups and websites with minimal time and effort.
- **Quiz let**: We want to provide a customized study tool for our students to memorize and review specific terms and concepts, Quiz let could be perfect for teachers. Quiz let is a web-based tool that allows users to create study tools such as interactive flashcards, tests and study games.
- **Socrative** : With the free version of Socrative and Socrative K-12 plan, you can have up to 50 students in a room take a quiz. With Socrative Pro for Higher Ed and Corporate, we can have up to 200 students in a room take a quiz. It allows teachers to create simple quizzes that students can take quickly.

### Initiatives of Govt.of India in online education:

During the COVID-19 outbreak in the entire nation, the country is facing major crisis in every sector. The digital learning portals help the students not only get full access to the study material but also allow them to engage in online classes and interact with the teachers like the physical classroom setting. SHAGUN is an online junction the primary aim of the SHAGUN initiative is to facilitate both teachers and students with a platform where they can interact, however through digital medium for further learning. There are 3 e-learning platforms which comes under the purview of SHAGUN: NREOE, DIKSHA, e - Pathasala

- **National Repository of Open Educational Resources (NROER) :**  
NROER is one of an excellent initiative launched by the Ministry of HRD. Students visiting NROR platform will get an exposure to e-libraries, e-books, e-courses, chance to participate in events online, and theme based education.

- **DIKSHA:**

The Ministry of HRD has launched National Digital Infrastructure for Teachers (DIKSHA) portal to equip teachers from 1<sup>st</sup> class to 12<sup>th</sup> class into the world of e-learning. The platform is available for both teachers and students requiring learning material. DIKSHA is one of a unique app that requires students and teachers to SCAN the QR code available in the book in order to access the prescribed learning material.

- **e-Pathasala :**

Through this web-portal, students from class 1<sup>st</sup> to 12<sup>th</sup> will be able to access . The digital repository has been made available by NCERT to make sure that the students do not miss out on any important concept to be taught in the class.

- **SWAYAM:**

An initiative of GoI for the students pursuing education from class 9<sup>th</sup> to 12<sup>th</sup> and also for the aspirants seeking undergraduate and post-graduate level degree, SWAYAM facilities study material at one destination. Students can access study material in the form of Video lectures, reading material, self-assessment tests, online discussions and doubt sessions. This portal is connected to national coordinators such as AICTE, NCERT, IGNOU, UGC, NPTEL, NIOS, IIMB, NITTTR, and CEC for delivering updated and excellent quality content to the aspirants.

### **Lack of support systems:**

Bates & Sangra, 2011; Guri-Rosenblit & Gros, 2011 many studies highlight the fact that academic faculty find that teaching online is time consuming is more isolated and requires specialized skills. Many academics report that they do not feel confident in utilizing the advanced technologies and this lack of confidence affects to a great extent the way in which the learning/teaching processes are conducted.

### **Conclusion:**

The corona virus pandemic has adverse effects on education. Including academic programmes, research, professional development of an individual these effects were felt by educational institutional, educators, students and parents in education .There is a need for adoption of technology in education. Addressing these issues there is needed to integrate technology in their profession. So this is the time to help teachers familiarize themselves with computers and build strong association with computer skills.

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