



---

# Technology-Based, Digital Pedagogical Strategies: A Revolution In The Classroom

CA Priti Sharma<sup>1\*</sup>, Dr. Rupa Khanna Malhotra<sup>1</sup>, Ms Shweta Chauhan<sup>2</sup>

<sup>1</sup>Department of Commerce, Graphic Era Deemed to be University.

<sup>2</sup> Assistant Professor, School of Management, Graphic Era Hill University, Dehradun

<sup>1\*</sup>Corresponding author: priti\_rke@rediffmail.com

---

## ABSTRACT

In light of COVID 19, universities must rethink social networking, classroom continuity, and online examinations. All of these challenges have been solved and new avenues created because to advances in educational technology. Higher education students have access to ERP, Moodle, Online Video Lectures, Google Classroom, Google Meet, and Microsoft Teams. The central government has encouraged universities and other prominent institutions to use digital teaching methods by providing online environments such as MOOC, ATAL, and Swayam. Universities must digitize education to sustain its relevance and generate new student-teacher and teaching-learning processes. This study examines the relevance and future viability of emerging digital education methods in light of the epidemic. Study also attempts to highlight the challenges ahead education sectors in going digital.

**Keywords:** Covid 19, social networking, online examinations, educational technology, digital teaching methods.

## 1. INTRODUCTION

The World Health Organization (WHO) announced the pandemic status of the COVID-19 virus on March 11, 2020. (WHO), and, in the wake of the seriousness of the issues and to combat the havoc, India had instituted a Janta Curfew on March 22, 2020, that would last for 24 hours. Following Janta Curfew, India declared the first phase of the lockdown beginning March 25, 2020 for a period of 21 days, as stated by the Prime Minister. The government of India has been closely monitoring the effects of the virus, which has led to a steady expansion of the lockdown. During and after the lockout, higher education establishments across the country were unable to quickly resume their regular instructional operations. This situation persisted even after the lockdown was lifted. In the wake of the COVID-19 epidemic, the education system is fighting tooth and nail to maintain its viability, while other systems are in complete disarray. The government has granted permission to schools to remain open until March 2021, which is well after it is anticipated that the number of COVID-19 cases will have decreased significantly. On the

other hand, many parents are opting not to have their children attend high school or college so that they can protect them from the possibly lethal disease. After March 2021, it was determined that there was a second wave of COVID-19, and things began to rapidly deteriorate after that. This time, because of the rapid increase in the number of events, the authorities were required to issue lockdown alerts in stages. As a consequence of this, schools did not have much of a choice but to stay up with the new online-learning initiatives that were introduced in March of 2020.

Even when schools are closed, children can continue their education by participating in webinars and taking online classes. Although this is a good endeavor, it will have a catastrophic effect on the majority of students because they will no longer be able to participate in online programs because they cannot afford to do so. Teachers who were comfortable with the chalkboard, chalk, and books but who were not familiar with the digital techniques of teaching stepped up to the plate and supported their students in a really admirable manner. Technology has made it easier to obtain an education from a distance by facilitating methods such as online classes, webinars, and digital examinations. This research will concentrate on the emergence of new digital teaching tools, as well as their value during this epidemic time and their potential for further development in the future.

## **2. LITERATURE REVIEW**

Finding that India is not yet prepared to use digital platforms to bring education to every corner of the country, the author of a study on the Impact of COVID-19 on Education in India discusses emerging approaches for higher education and various online initiatives launched by the MHRD and UGC. These initiatives include Diksha, e-Pathshala, the National Repository of Open Educational Resources (NROER), and the Swayam portal, amongst others. The study was conducted to evaluate the effects of CO The digital platforms that are currently being used at colleges may have unintended consequences for students who come from economically challenged families. On the other hand, the administration of the Indian government is currently working hard to find a solution to this problem. At this point in time, it is absolutely essential to broaden and deepen the expertise held by teaching staff at educational institutions. The infrastructure supporting information and technology needs to be robust enough to deal with any issues that may crop up. Even if the current conditions continue for a considerable amount of time, schools should make every effort to implement online and digital teaching strategies that will allow students to complete their degrees on schedule (Jena, 2020).

The author of a study that examined Microsoft Teams' utility as a web-based resource throughout the epidemic came to the conclusion that despite the platform's relative simplicity of use and effectiveness, it was rendered largely worthless because of the prevalent state of internet connectivity. The Microsoft team has gained recognition as a flexible system for the management and documentation of online courses as a result of the comments provided by professors. The only difficulty that has been encountered is that of educating lab volunteers. The fact that the Microsoft group requires a substantial

amount of bandwidth in order to operate effectively is its most significant shortcoming (Sangeetha, 2020).

The authors of the study also looked into the Zoom app, which is a cloud-based meeting and webinar service that also offers the ability to share documents and participate in video conferences. The author contends that this makes it easier for students to work together in the classroom by providing opportunities for teachers, such as English teachers, to assemble their students in a less stressful environment. When it comes to video conferencing, collaboration, chat, and webinars across mobile devices, desktop computers, phones, and room systems, the industry standard for today's modern workplaces is Zoom. Zoom is the name that everyone knows and trusts. Even when network speeds are poor, the Zoom platform continues to perform effectively because of its well-designed and robust architecture. According to the findings, Zoom is an excellent venue for the establishment of business relationships (Guzacheva).

In addition, Zoom has been investigated for its potential as a tool for the collection of qualitative data. Recent videoconferencing software, such as Zoom, comes equipped with a number of helpful features that make it particularly appealing to researchers who work with qualitative and mixed methodologies. When asked about the reliability of Zoom, 16 working nurses showed that, despite various technical challenges, the vast majority of interviewees had a positive impression of the platform. This was discovered through an investigation into the dependability of Zoom. The vast majority of individuals are of the opinion that Zoom is an improvement upon more traditional interview formats, such as in-person meetings or phone calls. As a result of these results, the usefulness of using Zoom to collect qualitative information is highlighted. The numerous beneficial aspects of data, such as its low cost, practicality, accessibility, and suite of management and protection choices, are likely to be credited with its recent meteoric rise in popularity. The author has suggested conducting additional studies into the use of Zoom in order to dispassionately investigate and move forward with innovations in online strategies (Archibald, Ambagtsheer, Casey and Lawless, 2020).

"Necessity is the mother of invention." This description works exceptionally well for the current COVID-19 scenario. Reading articles and publications written by academics makes it abundantly evident why it's time to phase out the use of chalk and talk in favor of digital education. In order for digitalization to be successful and to encourage student-teacher relationships in a way that is both efficient and effective, educational institutions such as universities will need to continuously upgrade their learning environments in order to stay relevant.

### **3. RESEARCH METHODOLOGY**

For the purpose of determining the present condition of the educational system, many reports from national and international organizations as well as research papers that were recently released on the Covid-19 outbreak were reviewed. Because we were unable to leave the building to collect data because of the lockdown and the regulations that were put in place by Covid, we had to rely on a wide variety of credible online

resources, such as articles, reports, and electronic books, in order to gather information about the impact that digital teaching pedagogy has had on India's educational system.

## **4. DISCUSSION**

### **4.1 Technology Enabled Teaching Methodology**

Since March of 2020, instructors have been forced to confront challenges that are inherently associated with the move to totally digital classrooms. Their education is made more interactive and engaging by using a number of online resources in tandem with one another.

### **4.2 Technology Enabled Digital Teaching Platforms**

#### **4.2.1 Cisco Webex Meetings**

Cisco Webex is an ideal choice for online education since it is a cutting-edge platform that supports the most recent codecs and provides sharing of audio and video content that is in crystal-clear quality. In the event that you take notes during a meeting but subsequently find that you have forgotten an important point that was discussed, you can revisit the meeting and read the notes. Users are able to collaborate on projects by sharing their screens, files, and videos with one another on the platform. The software protects users' privacy by encrypting and decrypting conversational information with both strong encryption and decryption technologies. On the other hand, it can on occasion bring about issues while utilizing the browser-based or online program version. It is quite difficult to share both video and audio in an effective manner over a slow internet connection. At the request of the user, the User Interface that is normally displayed might have additional personalization settings added to it. Users have also discovered that anytime they flip between sharing and not sharing their screen, WebEx immediately mutes the host. This happens everytime the user shares or does not share their screen.

#### **4.2.2 MS-Teams**

The use of Microsoft Team as a platform for online chat and video conferencing is very common in the business world and in educational institutions. The overwhelming majority of teachers have good attitudes toward the practice of offering classes, exams, and homework assignments online. The recorded presentation will be available for students to view whenever it is most convenient for them, giving them the opportunity to catch up on any lessons they may have missed. In the comments section of this post, you may also rapidly ask questions and discover answers to those queries. Because of its extensive use as a digital teaching tool and its user-friendly design, the website is one of the most essential resources that is now available. However, the functionality of the website is negatively impacted when there is no dependable internet connection.

#### **4.2.3 Zoom**

Not just educators but many other types of working professionals from all over the world use the Zoom app. This tool has received a lot of praise because it is able to permit the quickest and highest-quality music and video transfers possible, in addition to providing characteristics that are both convenient and save time when sharing these files with other people. Because it combines and presents multiple processes in a single view, Zoom allows for a reduction in costs as well as an increase in efficiency. This program not only streams high-definition video and audio over Wi-Fi, but it also features a plethora of other useful capabilities, such as full-screen watching, simultaneous screen sharing, a cloud service, group chat, whiteboarding, and interaction with partners. All of these features can be accessed through the program's user interface. Screen sharing can be done remotely with as many as one hundred individuals at a time.

#### **4.2.4 Google Meet**

As a product offered by Google, Google Meet is in direct competition with other video conferencing services and applications, like Zoom and Microsoft Teams. Everyone who uses Gmail or Google Drive automatically has access to the free version of Google Meet. The one and only caveat is that users are need to have a Gmail account, which may be a deal breaker for those individuals who already possess a functional e-mail address elsewhere. Simply clicking a link is all that is required to begin or attend a meeting that is being held through the app. The user has the ability to adjust the resolution of the meeting in order to maximize data transfer. One of the most significant drawbacks is that it does not enable virtual backdrops or any of the other Zoom-like functions.

#### **4.2.5 Google Classroom**

Google Classroom has become an increasingly popular tool for sharing information with students in today's sophisticated school settings. The user interface is both basic and easy to understand, and it can be used from any device, not just desktop computers. We no longer have to send an email to each individual student in order to share a document with a large group of students. It is simpler and faster to assign work, and it is not difficult to determine who among the employees has finished their tasks. Because grades are automatically delivered to the assignment tab through Google Classroom, there is no need to print anything out for the purpose of grading. Google Classroom serves as a central location for teachers to interact with one another, share materials, and communicate with one another. There are a number of drawbacks to using Google Classroom, one of which is that it is not yet integrated with Google Calendar. This lack of integration may make it more difficult to organize class times and homework assignments. Because there is no mechanism for automatic updates, the activity stream needs to be inspected on a regular basis. Students do not have the authority to give the file to their classmates for evaluation until they have physically obtained it. One of the primary reasons why Google Classroom cannot entirely replace your learning management system is because it does not provide students with automatic quizzes and examinations.

#### **4.2.6 Kahoot**

The Kahoot platform enables teachers to utilize it to run games and quizzes for their students. This program gives teachers the ability to incorporate polls, discussions, and quizzes into their classroom instruction. The content is presented to the students in the classroom, and they answer questions about it while playing games and simultaneously gaining knowledge. Students are encouraged to study by playing games through the use of Kahoot!, which enhances student engagement and produces a learning atmosphere that is lively, welcoming, and interesting to students.

#### **4.2.7 Webinar**

The individual conducting the online lecture must first choose a convenient time for the entire audience and send out invitations to the class before the lecture can begin. Registration in advance is normally required for participation in a webinar because there is usually only room for a small number of attendees. The service provider will select a subset of users and then send them an email containing all of the necessary details, login links, and other instructions. It is also common practice to send a reminder message one minute before the scheduled start time of the online meeting. In order to join the webinar, attendees use a web browser to access the virtual meeting space just before the presentation begins. To the extent that the audience members' Internet connections are sufficient, they should be able to watch the full presentation without any noticeable lag or distortion. In a debate, audience members who can only listen to the presenter's voiceover may be unable to take part in the discussion.

#### **4.3 Conventional Classroom and the Online Learning Environment: A Comparison**

Instruction delivered in a conventional classroom setting and education received via the internet both play an important role in India's educational system. As a direct response to the appearance of the COVID-19 virus, traditional classroom instruction was supplanted with online instruction, which was also an urgent necessity at the time. The most significant benefit of taking classes through an online platform is the increased availability of flexible scheduling options, which is especially helpful for individuals who must balance their professional and personal responsibilities. Having a high level of intrinsic motivation, on the other hand, is very necessary if you want to be successful in this field of work. Setting up a specific amount of time each week for the purpose of education and cultivating an atmosphere conducive to study with a minimum of interruptions can prove to be highly beneficial. When students in a course that takes place in a physical classroom interact with one another in person, they produce a dynamic that is exclusive to that particular meeting. However, due to the lack of engagement in online classrooms, instructors are forced to rely on online discussion boards, chat rooms, and other forms of online discourse in order to cultivate a feeling of community among their students. Teachers working in conventional classrooms have access to a wide range of assessment instruments, including written assignments, tests, oral exams, and presentations. However, the number of different types of assignments that students in online classrooms can choose from is more restricted. The great majority of the time, teachers will determine students' grades based on the amount of time they spend

participating in online discussions, writing papers, and taking open-book tests. Teachers of online students generally assign material that may be used in the real world. This is due to the fact that online students are required to be self-directed. One of the most important distinctions is that the success of each format is greatly determined by the learning style of the learner. This is one of the most important differences. Students who are self-motivated, organized, and capable of working independently will do well in an online setting, but students who rely on their teachers for assistance may struggle. Self-motivated, organized, and capable students will perform well in an online situation. Those who are extroverts and who enjoy having face-to-face contact with their teachers and classmates may do well in a traditional learning environment, whereas students who are more introverted may do well in the more private setting of an online classroom. It makes no difference whether it's an old-fashioned method or a new one based on digital technology: in order for a teacher to be successful, they need to implement a technique that is proven to be effective.

#### **4.4 Implications for the Future of Technology in the Classroom**

Due to the global expansion of the Covid epidemic, many parts of the world have switched to online education as an alternative to classroom instruction. The Indian Ministry of Education has proposed a New Education Policy (NEP) for the coming year 2020, and one of its main focuses is on online education. In addition, facilitating their implementation in an online setting is crucial if the well-designed NEP provision of multi-point entry-exits and credit banks is to be practically usable. This is necessary in order to implement the NEP. As an added bonus, the cost of education on a computer is much lower than that of a traditional classroom. Online courses provided by some of the world's best universities allow students to get a world-class education without breaking the bank. Due to individual differences in processing speed and memory, not everyone benefits from traditional classroom instruction. Some students have unrealistic expectations of what they can learn in a typical four-year university. However, getting an education online helps pupils sharpen their concentration and learn more niche topics. In a traditional classroom setting, it is impossible for teachers to give each student the individualized attention they need, whereas in an online setting, some students will be very engaged while others may prefer to sit back and listen.

The advantages of e-learning are not limited to those enjoyed by students; they also extend to teachers in many different ways. Our educational system has remained mostly unchanged since its inception, placing a heavy burden on its participants, especially educators. However, with the advent of online education, this has changed. Time-consuming tasks such as taking attendance, transferring answer sheets, and manually grading each student's performance could be performed more efficiently by AI software. Because of this, a lot of valuable classroom time is lost. To fully realize the potential of today's accessible, affordable, and accessible online education, we need to seize the moment.

In the not-too-distant future, online education will be something that everyone does; consequently, we need to get ready for the shift. It's no longer a luxury but a necessity at

this point. Governments today must use technological advances to provide water, shelter, and education to all populations.

#### **4.5 Challenges Ahead Education Sector in Going Online**

The new laws make it even more difficult to incorporate online learning into the traditional educational system. In rural India, 30 percent of the population is unable to use a computer, and many residents are unaware of the basics of computer use. We need to be fluent in computers if we're going to roll out online education across the country. Cost is a key concern as well. For people coming from middle-class or lower earnings, buying a computer or laptop is a huge expenditure. Educators face a major challenge as well, as making the shift from effective classroom teacher to exceptional online educator is not easy. There is no way to get practical training through an online course. Students in scientific and practical arts classes, in particular, often require a hands-on component to their education in addition to the theoretical explanations offered by their lecturers. Children in India's rural areas cannot access live sessions because of poor network infrastructure. Lack of internet connectivity is a major problem even if people in remote areas have access to and can learn to use modern technologies like smartphones, laptops, and tablets.

#### **5. CONCLUSION**

It's challenging to teach kids online since they need to communicate with the teacher in so many different ways. Educators need to employ a variety of methods in order to ensure the success of online learning. In the first place, teachers need to be open to using new tools and, more importantly, should be prepared to tell their pupils that this will be a major paradigm change for everyone involved and may take some time to adjust to. Then, a fallback solution needs to be ready to go, as you never know when a technical problem will arise. It's possible for a number of issues to arise with online instruction and learning. Issues with the network, broken links, or unlinked videos are all examples of this. During these circumstances, keeping students interested is more difficult, therefore having a backup plan is essential. The teacher should also try to use nonverbal communication language like emojis, which are popular with today's pupils, to demonstrate his or her significance in the classroom. In addition, the teacher needs to assert dominance in the classroom by using an interactive strategy for education. In order to succeed academically, students need to be familiar with online learning strategies and the weight assigned to individual classes and programs. Teachers should promote student queries as a means of building rapport with their students. In order to establish digital teaching methods as the optimum teaching-learning methodology, it is important to monitor student engagement and address them individually if they are not contributing or are dominating dialogues and not allowing others to participate. It's possible, for instance, to keep tabs on students' participation and personally reach out to them if they aren't contributing to class discussions or seem disinterested.

The most effective method is to use a "blended teaching-learning" approach, which combines elements of both traditional and online education to overcome the strengths



and shortcomings of each. The course material is designed to be equally effective in a classroom setting and via distance learning. There are a number of possible approaches here, depending on the material and the instructor. Teachers might, for instance, have their classes meet once a week for a lecture but have their students do all of their other homework, such as research papers, online. Students can still have flexibility in their schedules while taking advantage of the many benefits of face-to-face, socially interactive learning.

## **REFERENCES**

- Jena, P. K. (2020). Impact of Covid-19 on higher education in India. *International Journal of Advanced Education and Research (IJAER)*, 5(3), 77-81.
- N. Sangeetha (2020). "Microsoft Teams as a saviour of online teaching tool during the pandemic: A study on professor's insights," *Efficacy of Microsoft Teams during COVID-19-A Survey*. Bonfring Publishing, 343-363.
- N. Guzacheva, "Zoom technology as an effective tool for distance learning in teaching", Retrieved from <https://www.profolus.com/topics/advantages-and-disadvantages-of-google-meet/G> ENGLISH TO MEDICAL STUDENTS, *Bulletin of Science and Practice*, 6. 457-460. 10.33619/2414-2948/54/61.
- Archibald, M. M., Ambagtsheer, R. C., Casey, M. G. and Lawless M. (2020). Using Zoom Videoconferencing for Qualitative Data Collection: Perceptions and Experiences of Researchers and Participants. *International Journal of Qualitative Methods*, 18, 1–8.