DIGITAL TEACHING AND LEARNING: CHALLENGES AND OPPORTUNITIES

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ABSTRACT

The crisis of the coronavirus pandemic has affected every sector of the economy. Higher education has been facing different challenges, even before the COVID-19. Before COVID-19, the Indian economy started slowing down. The coronavirus pandemic has created extraordinary hurdles for learners left behind by the digital divide. Since the educational institutions were closed by the COVID-19 outbreak, suspension of classes led to the disruption of academic schedules plans at schools and higher education institutions. Educational institutions worldwide are now scrambling to switch from offline courses to online courses for an entire nation. The fear of COVID-19 has gripped both the teachers and the students, and it is logical to suppose that neither the teachers nor the students are in a mental state to engage in the learning exercise in its genuine spirit. The challenges faced by the teachers pertaining to digital literacy, good quality information, and suitable information systems etc. made the teachers see the importance of online learning to find the competent educational platforms aimed at raising the academic performance of the students. It is possible that online learning may develop as a viable alternative to traditional education in India, but only if the government properly plans and implements it. Many educators believe that online education will be the preferred method of instruction in the future due to the abundance of options it provides.

KEYWORDS**:** ICT, Online teaching, challenges, opportunities, e-learning

INTRODUCTION

Online education is gaining importance and impetus. Online teaching is a new paradigm shift for teaching and learning. It is a shift from top down lecturing to more interactive, collaborative approach in which students and the teacher co-create the

learning process. It is a constructive and collaborative process. It is constructive in the sense that the learners co-create their learning experiences, as active learners rather than passive recipients of knowledge. It is collaborative as each participant can be a teacher as well as a learner. The teacher acts as a guide, a role model, connecting with students, moderating discussions to lead students towards the larger learning goals" (Joshua Stern, P2, 3). Discipline, etiquette, morals, and interaction with other students and teachers are part of a well-rounded education that goes beyond the curriculum. It's challenging to instil these characteristics in students via online instruction. Even if online teaching is the last alternative, it is best used in a small group of 10 to 15 students. For a country like India, where public education is the norm, online education is a glaring mismatch. To effectively convey and assimilate online content, educators and students must be taught in the offline mode. But the implementation of ICT in education for active online learning is still limited on account of economic constraints.

Oyedotun (2020) in Guyana highlighted the problems and challenges faced by the teachers and students:

- Lack of resources.

- Poor national infrastructure.

- Course delivery problems.

- Students' adjustment to work from home and focus on lesson against the distractions.

- Fear and anxiety.

The importance of e-learning is primarily due to the use of information and communication technology (ICT). The interactive technology supports different type of capabilities such as:

- Access to digital material via internet unavailable locally;

- Simulation or models of scientific system;

- Communication tools for collaboration with students and teachers,

- Tools for creativity and design;

- Data analysis, organising tools and application (Ref. Diana Laurillard, P1, 2004)

According to research, using digital tools can help students learn more effectively in technology-related subjects in math and science classes (Ozdemir, Sahin, Arcagok, & Demir, 2018).

Maatuk et al (2021) in a joint study from the different faculties in Libya, Jordon, and Saudi Arabia pointed out the main challenges and barriers of e-learning pertain to:

- High cost of implementation i.e. for technical and financial support.

- Technical background and skills.

- Low quality of Internet Services.

Scientific advancements, as well as the worldwide computerization of different human activities, have led to the development of digital education. In modern education, this new format has become one of the most important ones. Due to Covid-19 pandemic, the gradual transition to online platforms (from 30-50%) has grown into a full transition.

According to Stack, Steven (2015), Internet education has increased in the recent decade. His research has not identified any big difference in the scores of the students taking online course and face to face sessions. Another research done by Dr. Fahad N. Al-FAHAD investigates the attitudes and perspectives of 186 university students from various institutions concerning the efficiency of mobile learning in their academic endeavours. Students believe that mobile technologies are an excellent tool for boosting their communication and learning, according to the findings of their research. Herman, T., & Banister, S. had done a research on A comparison of traditional versus online courses in terms of cost and learning results is presented. According to their results, online courses engage students in the learning process, support high student learning outcomes, and save money for the institution as well as the students who take them.

Challenges of Online Teaching: Digital Divide: Lack of Proper Infrastructure

The digital divide between instructors and students in India, as well as in other developing nations, is exacerbated by factors such as access to the internet and internet

connectivity, non-availability of sophisticated electronic gadgets, computer, laptop or smart phones for students; lack of proper working space, lack of prior training of the teachers and students for online teaching and learning, added to challenges for the teachers as well as the students. It is a well known fact that India has a digital divide and online education becomes a weapon for aggravating the knowledge divide.

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The impact on the education sector has been significant as it exposes the digital divide in India. It has highlighted a huge gap in the digital divide between rural and urban India where growth is biased in favor of urban areas. From Skype to Whatsapp to Zoom apps, professors and students are using all types of digital platforms in big cities, but the harsh reality is faced by those who are staying in remote villages with little or no internet connectivity. Millions of students are still struggling to get access to the internet. Teachers are everywhere facing one biggest challenge of how to keep a connection. The most affected are low-income students who are being left behind their peers because they cannot afford the necessary technology. The teaching-learning process is highly affected by COVID-19. Slow internet speed and connectivity are major challenges faced by faculty who are conducting online classes. Shifting to computer-based learning from face-to-face conventional classrooms in a virtual classroom makes the learning experience different for many students. The unprecedented situation due to COVID-19 has resulted in unexpected disruption which requires all educational institutions to take immediate steps to address the obvious anxieties of students. The edutech industry is taking the lead and flipping the traditional notion of classrooms. This digital

divide becomes more problematic as it will results in inequalities leads to gaps in achievement which will widen in the coming months. A sudden shift to virtual classrooms amid this crisis, it is not as easy as it sounds. Apart from the challenges of connectivity and accessibility another important challenge for educational institutions is that teachers need to have the proper training to deliver online lessons as it goes beyond replicating classroom teaching in a virtual medium.

- A new study on the most current National Statistical Organization (NSO) survey demonstrates precisely how severe the digital gap is among states, towns and villages, and income levels, according to the NSO report. The survey on household social consumption connected to education was done as part of the NSO's 75th round, which ran from July 2017 to June 2018. It was the 75th round of the survey. Only one in every ten Indian families has access to a computer, whether it is a desktop, a laptop, or a tablet. On the other hand, over a quarter of all households have access to the Internet, which may be reached on a fixed or mobile network using any device, including smart phones. (The Hindu, 8 September 2020).

In the first decade of 21ˢᵗ century studies were conducted to overcome obstacles of online teaching.

The research **studies conducted during 2020-21** highlight teachers' experiences as well challenges faced by them in online teaching from home.

With the lockdown in March 2020 due to the pandemic, a number of research studies were conducted throughout the globe regarding the challenges faced by the teachers as well as the learners, be it in the field of Languages, Science, Maths, Medicine, or Social Sciences, especially in tertiary education. Reason being that all the institutions were not ready to transfer the entire process of education process to be online, and secondly all components of learning and teaching have been changed by going online.

The teachers' experience of online teaching highlights the pre-requisites of online teaching, which may result in challenge as well. Such as:

- Telecommunication infrastructure.

- Technical knowledge.

- Organizational skills with respect to subject matter/content development, preparation, presentation.

- Time management.

- Involvement of students.

- Online assessment.

These challenges are almost universal, faced by the teachers, as reported in the research literature.

Hassan (2021) mentioned a number of challenges as:

- Attitude of the learners.

- Readiness of students for online learning.

- Self-efficacy of the students (search strategies).

- Technical knowledge of the learners.

- Organization skill and understanding of the students.

- Motivation, interest, and persistence in participation.

To top all much depends on students' perception of online learning.

- Besides, there are other challenges related to technology i.e. ICT competency to design and deliver the courses, recording the lesson, video conferencing, uploading the contents, etc. and

- Tackling with Internet (speed and other glitches); lack of modern computers, there are technical problems pertaining to:

  Interaction i.e. challenges relating to engage the students in the session and

  Problem pertaining to interaction: Teacher-students, student-student, student-content;

Problems relating to Assessment and Grading

- Objective based assessment of learner's performance along with their learning skills.

- **Practical work in labs:** In Science subjects, workshops, training programmes etc.

- Infrastructure

Almazova, et al (2020) in their research study regarding the main challenges experienced by: 87 University teachers during Covid-19 in Peter and Great St. Petersberg Polytechnic University, (Russia) highlighted:

- Computer literacy level;
- University electronic environment and support;
- Academic staff readiness;
- Student readiness for online learning.
- In order to develop many of the higher order learning skills, such as analysis, synthesis, and critical thinking, it is frequently necessary for students and teachers to interact with each other. Fostering educational experiences, where students are forced to question ideas and achieve profound understanding, is particularly crucial in the development of academic learning. There will often be dialogue and conversation, either one-on-one between the instructor and the students or between the instructor and a group of students, in order to accomplish goals. As a result, the role of the teacher in situations such as face-to-face classes or online collaborative learning is crucial.

High-quality student-to-student interaction can be facilitated through the use of asynchronous online discussion forums integrated into learning management systems. Students can interact with one another in MOOCs and community of practice, as well as with instructors. Merely putting students together in a group, whether online or face-to-face, is not likely to lead to either high levels of participation or high quality learning without careful thought being given to the educational goals of discussion within a course, the topics for discussion and their

relationship to assessment and learning outcomes, and without strong preparation of the students by the instructor for self-directed discussions.

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