# Rethinking Education: An Overview of E-Learning in Post Covid-19 Scenario

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***Abstract:*** *Covid-19, the global pandemic outbreak, has led to worldwide closure of institutions of higher education, including India. This complete and continuous lockdown has not only affected the social order of the country but has also changed the education system. The Post Covid-19 scenario has radically changed the whole teaching-learning process, in addition to the student-teacher relationship with virtual classrooms across distances by adopting modes of Information and Communication Technology, on various connectivity platforms. Technology has always remained a part and parcel of teaching environment but the teaching-learning patterns are constantly redefined in response to the challenges posed by the global forces. Although, the concept of online teaching or E-learning is not new; it is perhaps the biggest challenge amidst global Corona crisis, especially in India. Thus, this paper throws light on the impact of Covid-19 on the higher education system.*

*This paper is divided into different sections in order to provide a brief overview of what is E-learning, different modes of communication used in E-learning and inter-relationship between Information and Communication Technology (ICT) and the new teaching-learning process. The paper further tries to cover constraints related to E-learning and explore the ways in which the conventional teaching can be synchronized with the unconventional liquid or blended learning for the benefit of both the students as well as the teachers in higher education system, especially in India.*

***Key words:*** *E-learning, Online teaching, Information Technology (IT), Information and Communication Technology (ICT), Virtual classrooms, Higher education, Blended learning.*

**INTRODUCTION:**

Covid-19, the global pandemic outbreak, has led to worldwide closure of educational institutions, including India. The global epidemic has radically changed the whole social, economic and political order; including the education sector. The conventional form of education practiced since Independence of India has suddenly become an inefficient mode of education since the second week of March, 2020, when the State declared a Curfew followed by a complete lockdown. The structure of education system in India, including

teaching-learning process and assessment methodologies, was perhaps the first to be affected by this continuous lockdown eventually becoming a critical time for the education sector to face the emerging new challenge. Therefore, the Post-Corona scenario brought effective technique of blended learning in practice in Universities across the globe, thereby changing the whole future of the teaching-learning process.

Technology was and still has always remained a part and parcel of teaching curriculum but the teaching-learning patterns are constantly redefined from time-to-time in response to the challenges posed by the global forces. Although, the concept of online teaching or E-learning is not new; it is perhaps the biggest challenge amidst global Coronavirus outbreak, especially in India. The biggest concern was to impart education by the use of technology to students across different places and from different backgrounds because access to the internet might not be uniform, leading to the problem of digital exclusion. The outbreak of Corona virus and associated disruptions has made major interruptions in the working of Colleges and Universities; thus standing as the most testing/confronting time for higher education system in India. As an important catalyst to ensure equal access to the digitalized world, "digital exclusion" deals with gender-based, hierarchical, sociological, economical and psychological aspect of human life (Manazir, 2019).

Despite the Guidelines issued by the University Grants Commission (UGC) to use different modes of Information and Communication Technology (ICT) to incorporate E-learning in classrooms, the institutions of higher education in India has not been efficient in implementing those Guidelines despite of too much money being spent on developing digital infrastructural facilities like smart classrooms, labs equipped with projectors and all other necessary requirements, etc. It was only amidst the post-pandemic era that the teaching fraternity realized how prepared and unprepared were they to meet the challenges of the new teaching-learning process, with virtual classrooms bridging learners across distances by adopting modes of Information Technology (IT), on various connectivity platforms. It was only during these three months that higher educational institutions across different states in India acknowledged the importance of blended learning to get out of this difficult situation and to come up with new ideas and experiments to be practiced in the virtual classrooms. Thus, it is a foregone conclusion that the use of digital technology will be the "New Normal" and an integral part of future education system in India.

## RESEARCH QUESTIONS:

i. What do you understand by the concept of E-learning and blended learning in higher education?

ii. What are the modes of communication used in online learning?

iii. How Information and Communication Technology (ICT) tools and E-learning are inter-connected to one another?

iv. In what ways is E-learning understood as a challenge post Covid-19 scenario in India?

v. How can the functions of conventional learning synchronized with the unconventional E-learning for the benefit of teachers and students in the institutions of higher education, especially in India?

**OBJECTIVES:**

This qualitative research paper has been written keeping in mind the following five objectives:

i.    To explain and understand the concept of E-learning in the post-corona scenario;

ii.    To find inter-relationship between Information and Communication Technology (ICT) tools and the new teaching-learning process;

iii.    To highlight the challenges faced by the educators and students related to E-learning;

iv.    To explore ways and highlight functions of virtual classrooms in which the conventional classroom teaching, especially in India, can be synchronized with the unconventional *Liquid* or *Blended Learning* for the benefit of both the teaching faculty as well as students in higher education system; and

v.    Suggesting measures which can be used to raise the future economy of the country.

**METHODOLOGY:**

This research paper has been written through analysis of secondary data. Data has also been collected from journals, newspapers and material available on the internet.

**WHAT IS E-LEARNING?**

E-learning, also coined as *"Electronic"* or *"Online" Learning,* is an electronic learning method, which typically refers to the acquisition of knowledge which takes place via electronic modes of communication. Several terminologies such as distance learning, hybrid learning, virtual learning, digital learning, and others are used to describe learning practiced online cyberspace (Anderson, 2008). According to the dictionary:

> *"Learning conducted via electronic media, typically on the internet is known as E-learning."*

With the help of E-learning, the learner learns at a convenient level by using different Information and Communication Technology (ICT) tools such as computers/laptops, mobile phones, smart phones, tablets, i-pad's, etc. The learner acquires tremendous knowledge, replicating the physical classrooms and libraries over one click of a button. E-learning therefore describes interaction in which learners use different types of ICT tools in their online learning process (Laurillard, 2004). In the institutions of higher education, the term *"Online learning"* is interpreted as referencing courses completely offered online (Ryan et al., 2016).

Previously conducted research studies have shown how Information and Communication Technology (ICT) tools and online learning have been useful for both teachers and students in the institutions of higher education (Bhuasiri et al., 2012). E-learning has thus been effectively used in higher education institutions for enhancing the traditional forms of teaching-learning process (Laurillard, 2004). Therefore, the present and past E-learning approaches, besides adding computer-supported acquisition and distribution of

knowledge to conventional learning, have numerous other advantages such as flexibility (relative in terms of time and space), outcome-based learning and a wider access to the use of internet and technology, therefore, changing and evolving a new role of teachers and learners.

## E-LEARNING: MODES OF COMMUNICATION

E-learning involves two modes of communication, i.e., asynchronous and synchronous (Kirkwood et al., 2012).

➢ *Asynchronous modes of communication* can be explained as online learning situations where the learners interact with each other with the help of tools such as discussion forums, e-mails, etc. Asynchronous mode of teaching attracts more students because it has enabled them with opportunity to contextualize learning (Anderson, 2008).

➢ *Synchronous modes of communication* refer to learning situations which enables the students to learn in a classroom set-up, having face-to-face interaction with the teachers. Therefore, synchronous mode of teaching is similar to conventional learning where communication between a teacher-student is carried out in a real time (Hrastinski, 2007).

**An overview of two teaching modes of communication in E-learning**

|  | **Asynchronous mode of E-learning** | **Synchronous mode of E-learning** |
|---|---|---|
| **When?** | ▪ Reflects on complex issues<br>▪ Synchronous learning is not possible because of personal reasons | ▪ Discusses less complex issues<br>▪ Face-to-face acquaintance<br>▪ Tasks are planned |
| **Why?** | ▪ Learners have more time to give answers | ▪ Because of an immediate response, learners gain motivation |
| **How?** | ▪ Asynchronous means such as discussion forums, E-mails, blogs | ▪ Synchronous means such as face-to-face meetings, video conferencing, instant messages |

**Source: Hrastinski, 2008.**

**INTER-RELATIONSHIP BETWEEN ICT TOOLS AND TEACHING-LEARNING PROCESS:**

In the pandemic situation of Covid-19, the process of learning has now transformed into technical learning. In technology based classrooms, *Blended Learning,* i.e., a combination of online education and the traditional classroom teaching becomes important. It requires the physical presence of both the teacher and the students over the use of ICT[1] tools to facilitate effective teaching-learning process and impart knowledge to students beyond the limitations of conventional classroom-based lectures. In the era of digital learning, the role of a teacher has become challenging whereby his/her role is more of a facilitator than a knowledge-provider of the subject. Thus, the already existing format of pedagogy needs to be revised and re-modeled in this era of digitalization to meet the challenges of the new digital education system in India.

The practice of *Blended Learning* in the institutions of higher education imparts knowledge among the students and teachers to have wider access to the internet sources, in addition to promoting self-paced learning by the use of ICT tools. Thus, Universities are adapting the new outcome-based learning system emerged out of this global Corona crisis, which includes face-to-face conventional classroom practices along with computer-mediated activities, therefore increasing the interest of students in studies by making learning innovative and motivating them towards learning by providing plenty of e-learning material for study.

A number of online teaching platforms, such as WhatsApp, Zoom, Google Classrooms, Google Meet, Cisco Webex, Hangout Meet, You Tube, etc. are being used by the educational institutions to achieve the motives of E-learning. These virtual classroom tools by the use of ICT, have taken the teaching-learning process to the next level in our Country by providing ample opportunities' to both the teaching fraternity and the students. Hence, these e-tools help in filling the gaps left by conventional classroom teaching-learning process making virtual classrooms the new backbone of higher education system in India.

**E-LEARNING: CHALLENGES FACED BY THE EDUCATORS AND THE STUDENTS**

As discussed above, in order to continue the teaching-learning process post Covid-19; institutions of higher education in India suddenly had to change their pedagogy from conventional classroom teaching to unconventional online teaching via virtual classrooms. In the last three months, the World Economic Forum has reported an upsurge in the use of different platforms such as video conferencing, language applications, online learning software, etc. E-learning pedagogy was the biggest challenge for different stakeholders in educational institutions, i.e., Teachers, Students, University and College Administrators. Thus, electronic or online learning as a variant of self-governed learning, requires new capabilities, skills and techniques of educators and learners, that contain opportunities' as well as risks. According to the World Bank, 2000, a large number of higher education institutions in developing countries like India are facing problems in applying E-learning techniques due to three main reasons:

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[1] ICT- Information and Communication Technology

- Lack of access to trained online teaching faculty;
- Committed and goal-oriented students or learners; and
- Lack of sufficient resources to conduct online sessions.

Hence, implementing E-learning in teaching involves a complete restructuring in educational system in India, i.e., transition from conventional learning environment to an online learning environment changing the roles of both the teaching fraternity and the students (Cohen et al., 2006). The table given below shows the changed roles of teacher from conventional to online learning using ICT tools (Cohen, Manion and Morrison, 2004).

**Changed roles of a Teacher in Conventional learning to E-learning**

| Traditional roles of a Teacher in conventional learning | New roles of a Teacher in E-learning using ICT tools |
|---|---|
| ▪ Teacher-oriented | ▪ Learner-oriented |
| ▪ Teachers transmit knowledge to passive learners (who learn and obey) in a physical set up | ▪ Outcome-based learning whereby the learners analyze and question |
| ▪ Teachers set up tasks for individual learning | ▪ Teachers act as managers to promote collaborative learning |
| ▪ Learning is dictated to the students | ▪ An enabling structure is created online for learning of the students |
| ▪ Low order thinking | ▪ High order thinking |
| ▪ The role of a teacher is knowledge-supplier for the students | ▪ The role of teacher is a skill-developer for the students |
| ▪ A time-table for what, when and how the students will be taught | ▪ Sensitive to the cognitive needs and development of the students |

**Source: Cohen, Manion and Morrison, 2004.**

Therefore, despite of having many advantages, E-learning also has some disadvantages such as high initial costs for preparing online learning/study material, lack of peer-learning, missing face-to-face interaction and so on. However, implementation of E-learning in virtual classrooms has proven to be an expensive affair (The World Bank, 2000). Several studies suggest that presence of a good trainer with required skills along with quality study material are the most essential elements in courses that effectively facilitate online engagement of students in online learning process (Moore, 2014). However, it is challenging for the teachers to create sufficient learner support and link online activities to University resources (Fedynich et al., 2015). Facilitating teaching-learning process in a virtual classroom poses a number of challenges to teachers (educators), who struggle to adapt to practices in an online environment of teaching

(Mills, 2015). Hence, teachers as educators face hurdles because asynchronous virtual classroom environment impedes the growth of positive relationship between a teacher and a student.

Further, majority of the distant learners from remote areas of the country had to face technology struggle to participate in online learning either due to lack of awareness or non-affordability of ICT tools. Also, peer-learning is essential in the teaching-learning process (Watts, Malliris, and Billingham, 2015). Subsequently, under online mode of teaching, the aspect of peer-learning reduced to topic-based online discussions which had overall negative consequences over the students learning process in peer/friends' group.

Thus, for better understanding of any course, the comfort level and actual face-to-face interaction between a teacher and a student in a classroom set-up, along with skills and abilities of a teacher, plays an important role in making online pedagogy more relevant and interesting (Racheva, 2018). Hence, under E-learning mode of teaching, the co-ordination between a teacher and a student goes missing, thereby becoming difficult for the teacher to engage every learner in video conferencing eventually leading to reduced learning outcome and student satisfaction.

## VIRTUAL CLASSROOM ENVIRONMENT FUNCTIONS:

More than ever before, in the novel Corona virus outbreak, *blended learning,* which incorporates ICT tolls in the regular teaching-learning process, has come into limelight offering a whole new perception of outcome-based learning in the education system in India. Blended learning is also interchangeably used with hybrid teaching (Ryan et al., 2016). Connectivity platforms for online learning such as WhatsApp, Zoom, Google Classrooms, Cisco Webex, Hangout Meet, Google Meet, etc. are being used for holding Webinars, Conferences (National and International), Orientation Programs, Quiz and Contests, Workshops, Faculty Development Programmes (FDP's) to hold discussions in order to bring teaching fraternity and students together and facilitate the exchange of ideas and knowledge over the use of technology.

With the development of virtual classrooms, knowledge is shared over the potential use of internet using ICT modes, which can be used to explore learner as focus point and the teacher as an individual who uses different perspectives to determine learning situation of the student. According to Knoll and Jarvenpaa (1995), following skills are required for working efficiently in virtual classroom environment similar to the conventional environment of teaching:

- ➤ *Virtual socialization skills* by performing informal talks;
- ➤ *E-moderation skills* to perform the social author role of a teacher (trainer) online;
- ➤ *Virtual collaboration skills* by defining a set of rules for collaborative work; and
- ➤ *Technological* or *Digital skills* by using ICT tools.

Heiner et al. (2001) highlighted that a virtual teaching-learning environment must include the following:

| S. No. | Virtual Teaching-Learning Environment | Tools Used |
|--------|----------------------------------------|------------|
| 1 | **Authoring: The teacher** | Orientation on content of study and the process, creating learning skills and designing interaction. |
| 2 | **Facilitating factors** | Allocating roles, facilitation of reading, understanding, group discussions, etc. |
| 3 | **Technical tools** | Presentations in the form of bullets, use of hypertext, etc. |
| 4 | **Learning strategies** | Learners', i.e., a student's, adaptation and brainstorming. |
| 5 | **Evaluation Process** | Feedback of the students. |
| 6 | **Orientation Process** | Digitalization of environment, changing roles, positions and patterns. |

Valentina et al. (2014) in a study entitled, *"The Role of E-learning, advantages and disadvantages of its adoption in Higher Education",* classified a model for using E-learning in institutions of higher education. The model of education further classified online or E-learning into individual and collaborative learning, over the use of ICT tools.

Thus, virtual teaching-learning environment consists of:

➢ *Virtual environment* to support and mediate the teaching-learning process;
➢ *Teachers* and *students* interacting over the use of technology to perform their roles as *trainers* and *learners;*
➢ *A shared objective* in order to achieve the goal; and
➢ *A set of rules* to guide interaction between the teachers and learners (Preece, 2000).

**SUGGESTIONS:**

- Open-source digital learning solutions and Learning Management Softwares can be used for online teaching.

- In order to build a unified learning system, *Blended learning* should be adopted as a pedagogical technique in educational institutions at all levels.

- Inclusive learning solutions, especially for the poor households that cannot afford an ICT tool, should be developed.

- E-learning or blended learning courses should be designed to foster coherence between online (outcome-based) and offline (campus-based) activities and between educators (teachers) and the students (learners).

- SOP's should be prepared by the institutions of higher education to improve the quality of and demand for higher education in India with an aim to decrease the mobility of students and faculties to other countries.

- In order to mitigate the effects of pandemic on employment, job opportunities' should be created in every sector, i.e., Secondary and Tertiary sectors.

- Research projects and Internship programmes should be undertaken by the institutions of higher education to generate new employment opportunities' for young researchers.

- Courses on Yoga, Meditation, Art of Living, etc. should be integrated with higher education to serve the larger cause of humanity.

**CONCLUSION:**

To sum up, we can say that the Novel Coronavirus has significantly disrupted the higher education system in India which is a crucial factor to determine economic future of the country. The epidemic has however transformed the classroom chalk-talk teaching model of education to one ruled by technology. Different Information and Communication Technology (ICT) tools are used in this era of digitalization for effective E-learning. The platforms such as Zoom, WhatsApp, You Tube, Google Meet, Google Classrooms, CISCO Webex, etc. are more powerful in connecting students and teachers across distances over the use of ICT tools like mobile phones, laptops/computers, etc. A multi-prolonged strategy is necessary to build a resilient education system in India in the long-run because both the teachers (educator) and students (learners) are facing challenges in adapting to the new online teaching-learning environment.

In the present situation of crisis, an all-rounded approach for effective educational system is needed for the capacity-building of the young generation which in turn will enhance skills for their productivity, employability and psychological well-being in the next few years, and ensure overall economic progress of the nation. Thus, E-learning is a boon to the academic teachers and society as a whole, where conventional modes of teaching has changed and focus is more on outcome-based teaching with student equipment in their respective faculties.

**REFERENCES:**

Anderson, T. (2008). The Theory and Practice of Online learning. Athabasca, AB: Athabasca University.

Bhuasiri, W., Xaymoungkhoun, O., Zo, H., Rho, J., & Ciganek, A.P. (2012). Critical Success Factor for E-learning in Developing Countries: A Comparative Analysis between ICT Experts and Faculty. *Computers and Education.* Vol. 58, No. 2. Page 843-855.

Cohen, E. B., & Nycz, M. (2006). Learning objects and E-learning: An Informing Science Perspective. *Interdisciplinary Journal of Knowledge and Learning Objects.* Vol. 2.

Cohen, L., Manion, L., & Morrison, K. (2004). A guide to teaching practice. Florence, KY: Routledge Falmer.

Fedynich, L., Bradley, K. S., & Bradley, J. (2015). Graduate students' perception of online learning. *Research in Higher Education Journal.* Vol. 27, No. 1, Page 1-23.

Heiner, Matthias, Schneckenberg, Derk and Wildt, Johannes (2001). Online Pedagogies- Innovative Teaching and Learning Strategies in ICT-environments. Retrieved from http://www.eurospace.org/articles%20and%20reports/WPI_WG7_8_BP.pdf

Hrastinski, S. (2007). Participating in synchronous online education. Lund: Lund University.

Knoll, K. & Jarvenpaa, S. (1995). Learning to work in global virtual teams. Proceedings of the 28th Hawaii International Conference of Systems Sciences.

Kirkwood, A., Price, L. (2012). "The influence upon design of differing conceptions of teaching and learning with technology." In A.D. Olofsson and J.O. Lindberg (eds.), Informed Design of Educational Technologies in Higher Education. *Enhanced Learning and Teaching.* Page 1-120. Hershey, PA: IGI Global.

Laurillard, D. (2004). E-learning in Higher Education. Changing Higher Education.

Manazir, S. H. (2019). Why the UN's e-government survey in India needs to better understand the idea of digital inclusion. Retrieved from LSE South-Asia Blog: https://blogs.lse.ac.uk/southasia/2019/03/05/why-the-uns-e-government-survey-in-india-needs-to-better-understand-the-idea-of-digital-inclusion/

Mills, J. (2015). A Conceptual Framework for Teaching Statistics from a Distance. *The Journal of Effective Teaching.* Vol. 15, No. 1, Page 59-68.

Moore, J. (2014). Importance of developing community in online distance education courses. *TechTrends.* Vol. 58, No. 2, Page 20-25.

Preece, J. (2000). Online Communities: Designing, Usability, Supporting Sociability. New York.

Racheva, V. (2018). Social Aspects of Synchronous Virtual Learning Environments. 44th International Conference on Applications of Mathematics in Engineering and Economics. Pp. 020032-1-020032-9. Bulgaria: AIP Publishing.

Ryan, S., Kaufman,J., Greenhouse, J., Joel; Shi, R. & Shi, J. (2016). The Effectiveness of Blended Online Learning Courses at the Community College Level. *Community College Journal of Research an Practice.* Vol. 40, No. 4, Page 285-298.

The World Bank: The Task Force on Higher Education and Society (2000). Higher Education in Developing Countries. Peril & Promise. Retrieved from http://siteresources.worldbank.org/INTAFRREGTOPTEIA/Resources/Peril_and_Promise.pdf

Valentina, A. & Nelly, A. (2014). The Role of E-learning, advantages and disadvantages of its adoption in Higher Education. *International Journal of Education and Research.* Vol. 2, No. 12, December 2014.

Watts, H., Malliris, M., & Billingham, O. (2015). Online Peer Assisted Learning: Reporting on Practice. *Journal of Peer Learning.* Page 85-104.