

COVID-19 Pandemic: Challenges Due to Changing Uses of Digital Technology

*Ms. Karuna Bhardwaj

**Dr. Neeru Rathee

*Abstract

Educational organizations provide their students a lively environment where they study, discuss and share their knowledge and views and learn to face real world problems in close presence of each other. The base of this distinctive environment has been influenced significantly by this pandemic, creating dilemma in education system. The pandemic has sparked a seismic shift in educational paradigms around the world, moving away from traditional models, based on the idea that knowledge should be passed down orally to technology-enhanced methods of teaching and learning. Researchers have made an attempt to find out if this pandemic has affected teacher's digital competencies, their knowledge of digital tools and their uses in teaching and the challenges faced by administrators in teacher education institutes. An evaluative study was conducted by using a questionnaire and interviews to collect the data. The results of the study show that there is significant imbalance in intervention of technology in teaching and teacher's competency in using technological skills and also the institutions do not have the infrastructural facilities for online classes. It is found that teachers are still struggling in using technology in their classroom teaching due to lack of training and resources. There is dire call of utilizing the advantages of latest technological advancement as per the current scenario and envisaged by National Policy on Education 2019.

**Keywords: Technology, Teaching, Digital Competency, COVID, Higher Education*

Introduction

Covid 19 pandemic has compelled numerous countries to implement lockdowns that have brought everything to a halt, including the teaching and learning process. This pandemic has caused social separation and distancing in public domain at global level. The pandemic has put the entire educational systems under severe strain, raising critical issues

about the future of education system. Closures of organizations have forced teachers to implement "emergency remote education," which is very different from past practices. Systemic change is still a long way off since instructors who make use of ICT as innovative tools and techniques in their teaching practices do so without a structured lifelong learning process, preferring to cultivate "islands of innovation" in classrooms based on the work of exceptional teachers. (Valverde et al. 2021). This pandemic and increasing use of technology has completely changed the role of a teacher. It has become a big issue for a teacher how to divide his time as he has to perform various activities such as delivery of instructions, preparing presentations, engaging the students, searching relevant audios or videos and administrative work. It needs a great flexibility, more time to interact with students and moreover expertise in technological skills. These are the challenges which the entire teaching fraternity is facing.

This pandemic made the latest technologies accepted by almost all the organizations that were not ready to adapt rather the institutions and faculties were resistant to use these technologies. Though it was very difficult for the educational organizations to handle the current situations as it was very much challenging. It was expected that functioning on part of teachers shall be changed from conventional teacher centered model to technology based online teaching. Apart from teaching, there will be great change in the assessment tools, evaluation procedures, assignments and use of audios and videos. In the initial stage of online learning almost faculty members and administrators were confused regarding the results of the online classes. Some believed that this accidental and quick move to digital learning may result in a deficient user experience that is unfavorable to sustainable growth, while according to some others this new hybrid model may result with significant advantages. This is the reason that this study was conducted to assess the problems, obstacles, challenges of e-learning faced by the teachers and college administrators so that future planning can be done accordingly.

Objectives

To evaluate the experiences and digital competencies of teachers during the Covid-19.

To study the challenges faced by administrators of teacher education institutes during Covid19.

Methodology

Descriptive research method along with non- probability sampling technique was employed in current study. The data collection tools consisted of a questionnaire designed by the researchers along with the interviews. The participants in the study were the faculty members, principals and administrators of education institutions that run B.Ed. Program in Haryana.

Results and Discussion

Challenges faced by the teachers

The organizations were compelled to close in March 2020 because of the COVID-19 pandemic. The "emergency remote education" was employed and technology was enforced to mediate the entire communication between students and teachers. All the participants in the survey accepted that technology is playing a crucial role during the COVID phase. Educational technology centers (EdTech Centers) have undoubtedly been established as virtual locations for instructions and knowledge creation. According to a study by the Organization for Economic Co-operation and Development (OECD), education systems across 98 countries are concerned about and reacting to the so-called "new normal." With the sudden shift, changes were made in our education system and additional help and resources were provided like digital content to teachers, development of online training programs for teachers and infrastructure to conduct online classes as there was no preparedness for this immediate transformation. About 70 percent of participants, including teachers and principals, mentioned that either they were not aware of such resources or they did not find them helpful for their teaching as no prior training was given to them. They also mentioned that during their B.Ed./M.Ed. program, Educational Technology was part of their curriculum, but no practical training was given to them and still there is no focus on practice of technological skills in the current curriculum. Participants said that it was not easy to continue the teaching by using various online tools as they never used them before. Only intrinsic motivated students and who

were aware of new technologies seemed to show interest during the online classes. Therefore, most of the sessions became monotonous due to lack of proper interaction, low internet speed or connectivity. They also highlighted that most of our students are from rural areas and they did not have the resources and knowledge of technology to join online classes.,

Eighty-six percent of teachers said that it was difficult for teachers to give adequate time and attention to each student as there was no one on one interaction and they could not identify the problems faced by students in understanding of concepts. Almost 90 percent of teachers mentioned that in addition to conducting online classroom sessions, they were also responsible for generating the digital version of the teaching materials, which was very challenging for them because online classes need a lot of prior preparation like preparing power point presentations, to find relevant content, audios and videos in which they faced many problems. They also mentioned that this has been a matter of concern because many teachers lack the technological abilities to prepare the content for each topic quickly.

They admitted that they were not aware of online tools and techniques of assessment so to assess student's performance was also a great challenge to them. They were not having the experience of using online teaching strategies which created stress among them. The teachers reported that they remained under stress for a long period and their anxiety level was very high. COVID19 also increased their workload and it severely affected their daily life. Teachers also informed that they were not provided any platform for online classes initially but with the time the institutions have developed the infrastructural facilities and organized some training programs for faculty members for smooth functioning of classes. Eighty percent of participants mentioned that they were able to teach online after these training programs by using digital technological resources. They accepted that by using latest technological platforms like Zoom meetings, Microsoft Teams, Google Classrooms, Cloud Meeting, Cisco WebEx, Udemy, and Coursera which include features such as multiple-choice quizzes with instant feedback and grading of assignments and exams as well as whiteboard features to make teaching and learning more interactive, discussion forums for students, the education system could survive.

During the interviews conducted by the researchers, almost, 60 percent of participants in our study accepted that they need hands-on practical training for the proper use of ICT resources. Only 20 per cent of teachers accepted that they are trained enough to handle these platforms well. According to a study on "THE IMPACT OF COVID-19 ON EDUCATION - INSIGHTS FROM EDUCATION AT A GLANCE 2020" conducted by "Organization for Economic Co-operation and Development" mentioned that "teachers have reported high need of training for the use of ICT (Information and Communication Technology)". As per the report of this study, 60 percent of teachers accepted that they received professional development in ICT, while 18 percent reported a higher need for professional development in this area

The current global scenario has led to the usage of active approaches in the teaching and learning processes. Eighty percent of participants mentioned that they were able to teach because of the recent development in technological resources. They accepted that during COVID they got the opportunity of mastering technical skills which are essential for a teacher to enhance learning experiences of students and to face the threats like COVID in future.

Challenges faced by the administrators

The administrators mentioned that the chief challenge was unpreparedness on the part of the institutions to deal with this crisis. The readiness in teacher educator institutions regarding the ongoing transformative phase of learning due to digital age is in question (Houlden and Veletsian, 2020). They were not having any online platforms, online content regarding the syllabus nor any guidelines. There are technological laboratories in the colleges, but they do not have the technically specialized faculties who could be able to handle this situation or guide them. The administrators motivated their staff members to attend online workshops and also organized online faculty development programs. They have tried to incorporate some types of online education platforms into their system. They accepted that technology has played a very effective role in imparting education, in keeping pupil retention and engaging students in online classes. Without online platforms it could not have been possible, and the entire education system could be collapsed. As per the survey, situation was worst in some of the self-financing colleges where all the

facilities like faculty members and laboratories are on papers. The students of these colleges have struggled for completion of their coursework. Most of the faculty members have taken initiatives in this direction themselves and they are using their own devices to conduct the classes.

Conclusion

Many inconceivable developments have occurred since the Covid-19 epidemic outbreak. Many educational institutions, students, and teachers face numerous challenges at their workplaces specifically during delivery of instruction via distance education. Challenges mentioned by the participants during this survey are the result of lack of independent study habits of students, lack of online skills among teachers and students and maintaining the integrity and continuity of learning assessments due to various reasons. Students' and teacher's mental well-being, balancing digital and everyday life, and managing technological tools, developing online content and proper infrastructure were found the biggest challenges as encountered by the teachers and administrators. In, order to improve teaching, teachers have been made to use a variety of technological tools, which has resulted in an unavoidable transformation of their methods. Almost all of the educators have reported that they had tried to maintain regular contact with their pupils and their families during the academic year. The vast majority of teachers reported that they had shared variety of learning material with their students in addition to assigning work and providing feedback.

The outbreak of COVID-19 has brought various changes in the educational environment. One major change is the shift from offline to telematic classes in teaching and learning. It was a partial success in meeting the challenges by integration of ICT such as online teaching and online evaluation. What would happen if educational institutions won't be able to cope up with the rapid evolution of information and communication technology? There is dire need that teacher's professional development and pre-service and in-service training must include practical learning opportunities of ICT for future educators. Focusing solely on teaching basic digital skills, teachers should explore ways to incorporate ICT's interpretative and creative potential into their training activities. The bulk of teaching methods involve "superficial" or "basic" digital technology for pre-class

preparation, personal communication, use of word processing, slide presentations, and information search. The institutions should establish a separate IT departments and content creators are required to work in consultation with IT departments. According to the researcher, a better understanding of problems encountered during "emergency remote education" has been made possible by this survey like identifying deficiencies in teachers' digital competencies and existing training programs. Practical training opportunities and developing digital competency of teachers will allow students to learn whenever and wherever they want; a reconstruction of the standard teacher training strategy is necessary. Keeping in view these requirements, the entire scheme and curriculum of teacher education has been reframed in the NEP, 2019 and technical skills with new strategies are given central place to meet out, future demands.

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