Research Paper

PROBLEMS AND CHALLENGES IN ONLINE EDUCATION DURING COVID-19 PANDEMIC IN INDIA

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ABSTRACT

INTRODUCTION

areas in India have problem of power supply. Out of 200 students 54 (27%) students in this As I write this report in October 2020, COVID-19 pandemic has affected the world in many ways. Its direct and indirect impact can be seen on social and political conditions of almost all the countries of the world. According to United Nations Development Program (UNDP), COVID-19 pandemic is the greatest challenged faced since World War II. More than one million people have already been killed and around 400 million people have lost their jobs, which severely affected the livelihood of around 800 million people in the world.

Many countries including India imposed partial or complete lockdown to curb the pandemic, which severely affected routine social and economical activities and education system suffered the most. According to UNESCO, the education of 990,324,537 students of

130 countries suffered due the pandemic. All schools, colleges, and universities had to stop face-to-face classes and switch to online classes for which the students and the teachers were not well-prepared psychologically and technically. Many students and teachers neither had required training nor infrastructure to participate in online education. While teaching and learning in the rural areas in India almost came to a halt, it negatively affected education in the urban areas also. In the urban areas, most schools switched to online teaching with the help of whatever limited resources they had.

The lack of required infrastructure presented a big challenge as many students and teachers did not have computers and mobile phones with good internet connectivity. This problem was extremely severe in the rural areas. Other problems, such as lack of training and skill in using online platforms for teaching learning, also presented big challenges. The physical and psychological fitness of people during these trying days has been badly affected due to their loss of job, salary reduction, uncomfortable confinement, and trauma caused by the pandemic. Many guardians did not see any logic in paying school fee when their wards were not going to school due to which private schools reduced or stopped salaries of their teachers. In these circumstances, teaching and learning online was a big challenge and people had no other option. Today as I am writing this article, almost ten months have passed since lockdown was imposed in India in March 2020. During this duration, the teachers and the students prepared themselves mentally for online education. They invested time and money in arranging required infrastructure for online education and trained themselves in the required pedagogical technologies. In this study I tried to study the types of challenges that the students and the teachers experienced in online teaching and learning.

Review of literature

Online education is conducted through web platforms and students can access course material and participate in classes and even examination through internet from their homes. According to Allen & Seaman (2013) online courses are those in which minimum 80 percent of the course content is delivered online while in face-to-face instruction courses, less than 30 percent of the content is delivered online (pp 7).

In a way online education is not entirely new to India. In the last two decades, online education was slowly getting popularity. With the initiation of National Programme on Technology Enhanced Learning (NPTEL), the government of India started preparing ground for online education from 2001 and with the joint efforts of seven IITs, and IISC Bangalore, the NPTEL courses were successfully launched in 2003 (Sharma 2017). In the first phase itself (2003-9), 235 courses were launched and many motivated students utilized this high quality material available for free (Sharma 2017). 600 new NPTEL courses were added in the second phase, and in the third phase starting from 2014 many new courses have been added. Now NPTEL Online Certification is offered for a small fee of 1000 rupees. Now more than 500 courses with online proctored examination and credit certificates are available on SWAYAM portal and the Government of India has instructed Indian universities that the credits of online courses available on the SWAYAM platform can be transferred to students' academic record (https://swayam.gov.in/about). These courses are monitored by 9 government bodies, namely NPTEL, UGC, IGNOU, AICTE, NCERT, CES, NIOS, IIMB, and NITTTR have been prepared by more than 1000 teachers of reputed organizations.

Jindal and Chahal (2018) studied the challenges and opportunities of online education in India, with a particular focus on SWAYAM courses. They hinted at the possible positives of online education such as ease of doing course and low cost in comparison to face-to-face mode of education. The authors expressed hope about the positive effects of the factors such as government initiatives to promote online education and recognition of online courses. Factors like insufficient infrastructure and issue of credibility of quality of online education are the major challenges in their opinion. Online courses have become quite popular now.

Jena (2020) highlighted not only negative but also positive impacts of COVID-19 pandemic on education in India. While on one hand, the pandemic hampered educational activities due to lockdown, on the other hand it enhanced people's digital literacy and created opportunities for online education through online meeting apps, and Learning Management Systems. Joshi, Vinay and Bhaskar (2020) studied the problems and challenges faced by teachers of Uttarakhand, India in the beginning when they had to switch to online education due to COVID pandemic. They faced multiple challenges such as lack of financial support for purchasing advance tools and technologies and lack of technical support. Distractions and lack of basic facilities while working from home also posed challenges. Psychological barriers such as lack of motivation and negative attitude towards online education also impacted teachers' performance negatively.

There are some genuine concerns when we switch to online education. Online education does not address class-diversity as effectively as a face-to-face class does. As a result those students who need special attention and assistance lag behind and finally lose their interest in online classes. Due to lack of human touch and flexibility of participating in academic activity as and when they get time, many students lose seriousness and finally their motivation drops (Dhawan

2020:14-15). The pandemic has affected the psychological health of people and 18% people experience anxiety and stress and are in immediate need of clinical support (Schäfer et al. 2020). In these circumstances, it is important to know what kind of problems teachers and students are facing and what can be done to resolve them.

Aim of study and research questions

onsidering the wide ranging impacts of COVID-19 pandemic on education, it is important to study the issue from the perspective of teachers as well as students with a view to identifying the challenges and finding their possible solutions. Therefore, this work seeks to answer the following questions:

- What are the various problems and challenges that students and teachers face in participating in online education during COVID-19 pandemic?
- What could be the possible solution to address these challenges?

Methodology

The data was collected from 242 respondents out of which 200 were students and 42 were teachers who participated in online teaching/learning during the pandemic. Out of 42 teachers, 3 teachers taught the students of class eight and below, 6 teachers taught the students from class 9 to 12 and remaining 33 teachers taught UG and PG level students.

The data was collected through online survey using Google form. Since the data was collected through online survey, it is understandable that all the participants had internet access and were skilled enough to fill the questionnaire in English. In all probability, our data did not come from the underprivileged respondents who still do not have a smart phone and internet connectivity. Therefore, this study presents the picture of the online education among those people who are advanced in terms of skills and resources.

My questionnaire comprised total 14 questions. The first three questions were respondent's name, class level s/he teaching or attending, and his/her role as a teacher or student. The next 10 questions were asked to understand their problems and attitude towards online education. The last question sought the suggestions from the respondents to improve the effectiveness of online education.

The data was analyzed to understand the effectiveness of online education and what types of problems and challenges the teachers and the students face in participating in online education. Just statistical summary in terms of frequency has been presented as per the requirement for answering the research questions.

Analysis of teachers' responses

The data comprised the responses of 42 teachers. Out of these teachers, 3 teachers taught the students of class eight and below, 6 teachers taught the students from class 9 to 12 and remaining 33 teachers taught UG and PG level students. In response to the question about their teaching load of online classes per week, 8 teachers claimed that they took online classes for 5 hours or less, 12 taught from 6 to 10 hours, 10 teachers from 11 to 15 hours and 12 teachers claimed that they taught more than 15 hours per week.

Four questions were asked to understand whether the teachers have required infrastructure for conducting online classes and what type of problems they faced in this matter.

Device for conducting online classes

In response to the question whether they had suitable device such as smart phone or computer for conducting online classes, the teacher responded in this way. Two (4.76%) teachers claimed that they borrowed devices for online classes, and 7 (16.66%) teachers found their devices not good enough for online teaching. The remaining 33 (78.57%) teachers claimed that they had good devices for conducting online classes smoothly.

Internet connectivity

When asked about grading their internet connectivity, they graded their devices as poor, workable, good and excellent. Two (4.80%) teachers claimed that they had poor connectivity while 9 (21.40%) teachers claimed that their internet connectivity was not good enough for online teaching. Total 26 (61.90%) teachers claimed that they had good connectivity while 5 (11.90%) graded their internet connectivity to be excellent. This shows that 31 (73.80%) teachers had nice connectivity while 11 (26.10%) teachers felt they needed better internet connectivity for conducting online classes effectively.

Power supply

Some places in India have the problem of interrupted power supply due to which the teachers and students face problem in conducting the classes timely and effectively. While 12 (28.57%) teachers complained about the problem of poor and bad power supply, the remaining 30 (71.43%) teachers did not complain of such a problem. They graded the power supply at their places as good.

Place

A peaceful place is required for conducting the online classes effectively so the teachers in the survey were asked whether they had suitable place for conducting the online classes. Total 16 (38.10%) teachers in the study found their place unsuitable and poor for conducting online classes. The remaining 26 (61.90%) teachers claimed that they had a suitable place where they can conduct online classes.

Cooperation of family member Since most of the teachers have to work from home during the pandemic, the cooperation of the family members becomes crucial. Out of the 42 teachers, only 11(26.19%) teachers claimed that the cooperation they were getting from the family members was not good enough, while 21 (50%) claimed that they got good cooperation and 10 (23.81%) got excellent cooperation from their family members. In Indian setting, the cooperation of family includes giving the teacher sufficient time for teaching, not making noise, giving required technical support and arranging a peaceful room where online teaching sessions can be conducted. The general trend shows that the teachers in the study got cooperation from the family members.

Skill in using online resources

Due to pandemic, most teachers had to switch to online teaching without sufficient training and skills. It is interesting to see how the teachers graded their skill in using online resources after almost eight moths of facing pandemic challenges and preparing and practicing online teaching. Out of 42 teachers, 3 (7.15%) teachers graded their skills in using online teaching platforms and resources as poor and 8 (19%) teachers claimed to have working knowledge while 28 (66.70) teachers graded their online teaching skills as good and

3 (7.15%) as excellent. This shows that in the last nine months, most teachers in the study honed their online teaching skills and gained confidence of conducting online classes.

Views about online teaching

Teacher's attitude and motivation play an important in effective teaching. To know teachers' views about and attitude towards online teaching, they were asked how effective online teaching was in their

opinion. Total 23 (54.76%) out of 42 teachers ticked positive options like effective interesting and useful, and the remaining 19 (44.24%) respondents found online teaching tiring, boring, time-consuming and wastage of time. This shows that quite many teachers are apprehensive of the effectiveness of online teaching. This is a matter of great concern because a teacher with negative attitude towards online teaching can seldom be effective. It is also questionable how an unmotivated teacher would motivate his/her students in online classes.

When the teachers were asked how motivated they found their students in their online classes, almost half of the teachers were dissatisfied with students' response in online classes. While 7 (16.70%) teachers found their online students generally irresponsible, 13 (30.95%) teachers found their students as untrained for online education. Remaining 22 (52.35%) teachers were satisfied with their students' participation and motivation. They found their students generally motivated and cooperative.

Analysis of students' responses
My survey comprises the data of 200 students who attended online classes. 43 (21.50%) of these students attended online classes for 5 hours or less per week, 44(22%) students between 6 to 10 hours, 48 (24%) students between 11 to 15 hours and 65 (32.50%) students attended online classes for 15 hours or more. These students were asked various questions to understand their problems related to their online classes.

Device to attend online classes
The students were asked whether they had suitable devices such as smart-phone or computer to participate in online classes. Out of the total 200 students 157 (78.50%) had suitable devices and 37 (18.50%) students claimed that they had devices but they were not good enough. Total 6 (3%) students claimed that they did not have their personal devices to attend online classes. They borrowed the devices from others and possibly missed a few classes. The data shows that most of our respondents had devices to participate in online classes.

Net connectivity
Good internet connectivity plays a very important role in online education. Students in remote areas generally face problem of poor connectivity. Almost half of the students in this survey claimed that they did not have good internet connectivity; hence they faced problems in online education. Grading their internet connectivity, 5 (2.5%) students found it very poor; 26 (13%) students found it poor, and 64 (32%) students found their internet connectivity not good enough. Remaining 105 (52.50%) students found their internet connectivity good and excellent. Here we should not forget that this survey comprises the data from the students who accessed internet since the survey was conducted online. The problem is far more serious in rural areas where students face the challenge of poor connectivity and unavailability of a good smart phone.

Place
A suitable place is required where a student can attend online classes. When the students in the survey were asked question whether they had suitable place for attending online classes, 17 (8.50%) students claimed that their place was poor while 52 (26%) claimed that it was just workable but not good enough. The remaining students in the survey had no problem related to place for attending online classes. Total 99 (49.50%) students had good place and 32 (16%) had excellent place for attending online classes.

Power supply
Some survey complained about power supply. 18 (9%) students claimed that the power supply at their place was poor and 36 (18%) students found it not good enough. The remaining 146 (73%) students found the power supply in their area to be good or excellent.

Cooperation from family
When the students have to stay home all day and attend online classes due to pandemic, it is very important that the other members in the family cooperate with them by sparing them from household chore, giving them time, and a noise-free place. When our respondents were asked this question, 44 (22%) students in the survey complained about lack of cooperation from the family members. 5 (2.5%) students got very poor cooperation, 8 (4%) got poor cooperation, and 31 (15.5%) got a little bit of cooperation which was not good enough. Majority of the students got sufficient cooperation from their family members: 93 (46.50%) got good cooperation and 63 (61.50%) claimed that they were getting excellent cooperation from their family members.

Skill in using online resources
Certain technical skills are required for participating in online education. When the respondents were asked the question how they graded their skills in using online resources, majority of them claimed that they had sufficient skills. Just 5 (2.5%) students confessed that they had poor skills and 55 (27.5%) accepted that they just had working knowledge of using online resources, while 99 students claimed that they had good skills and 41 (20.50%) claimed to be excellent in using online resources. This analysis shows that my data comes from the respondents most of whom have sufficient online skills.

How do you find online classes?
In order to understand students' attitude toward online education and its effectiveness, I asked them a question how they found online classes. There were words showing positive and negative evaluation of online education and the respondents could tick multiple options.

52 (26%) students found online classes boring, 77 (38.5%) tiring, 28 (14%) wastage of time and 71 (35.50%) found it time-consuming. Quite many students found their online classes useful and effective: 102 (51%) students found online classes useful and 54 (27%) students found them interesting and effective. It shows that almost half of the students in the survey were not comfortable with online education.

Opinion about the teachers taking online classes
Our respondents were also asked question about their impression of their teachers taking online classes. Total 35 (17.50%) students found their teachers technically untrained to take online classes effectively and 10 (5%) students found their teachers irresponsible. The remaining students in the survey found their teachers motivated and skilled: 27 (13.50%) students claimed that their online teachers were skilled and effective and 128 (64%) students found them motivated and cooperative.

Suggestions from the respondents
In the last question, the respondents were asked to give their suggestions to improve the quality of online education. A summary of the suggestions has been given here. Quite many respondents suggested that arrangements need to be made for providing high speed data on a reasonable price even in remote areas in India. Teachers and students should be provided required training in using online teaching platforms effectively. Those who cannot afford suitable device and internet connection need to helped and some mechanism should be created that they do not drop out from online education. Students should be provided with study material in advance so that they can go to online class with some preparation and questions. Lectures should be recorded and shared so that all students can watch them as many time as required. Many suggested using PPT

slides in place of plain lectures. A few audio lectures in the form of podcasts in place of video lectures can give much needed relief to eyes. Online sessions should be short, say 30 to 40 minutes, and students should be given sufficient time for self-study. Some respondents suggested the use of prerecorded lectures for asynchronous classes and only tutorial classes need to be conducted in real time. Peer discussions should be facilitated by forming chat groups and forums. Some suggestions regarding improvements in examination system were also received. Some respondents suggested the inclusion of MCQ based examination and oral tests along with assignments
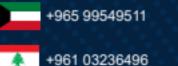
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