



Pre-Service Teachers' Perception, Experiences, and Issues with Online Classes

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ABSTRACT

At present, educational institutions have almost overcome the effects of the COVID-19 pandemic shock. However, there was a time when the COVID-19 pandemic forced educational institutions to suspend face-to-face teaching-learning classes and move to online temporarily. Every student, including Pre-service Teachers, faced this unprecedented situation. This research delves into the Pre-service Teachers' experiences with online teaching-learning. The study analysed 67 Pre-service Teachers' opinions and experiences of online teaching-learning by using a questionnaire and their reflections on issues and challenges of Online classes. The findings showed that the Pre-service Teachers exhibit a strong ability to adopt new technology and are willing to indulge in online classes, but they also have some concerns.

Keywords: Online Classes, Pre-service Teachers, Perception, Digital devices, Health issues, Science, Social Science, Language, Constructivist approach.

Introduction

At one point, all educational institutions, including schools, temporarily suspended the face-to-face teaching-learning process due to the COVID-19 pandemic. Consequently, the educational environment worldwide, from school to university, has shifted to online platforms (Roy & Srivastava, 2020; Todd et al., 2020; Verma et al., 2020). Once it was a controversial topic, particularly in some areas such as the Arts, online teaching learning is now commonplace in education (Allen et al., 2020). Various studies identified the pros and cons of online classes, including challenges and limitations (Allen et al., 2020; Kulal & Nayak, 2020). One of the significant factors influencing the quality of online teaching-learning is closely associated with how online instructional materials are designed and delivered (Muthuprasad et al., 2020).

Moreover, the effectiveness of online teaching depends on understanding the challenges faced by both teachers and students and adapting the content for online classes. The Pre-service teachers (henceforth PSTs) education programme is a suitable place where students can understand the issues and challenges of the online teaching-learning process (henceforth Online TLP) and develop their skills and abilities accordingly (Roy & Srivastava, 2020; Todd et al., 2020; Verma et al., 2020; Kan et al., 2022). Their experiences with online TLP could help them to design effective online instructional strategies. This study aims to identify PSTs' perceptions of online classes in light of their experiences. This study could help the teacher-educators and PSTs to develop, design, and implement the TLP in online classes.

Pre-service Teachers (PSTs) and Online Teaching-Learning

Teaching involves deep knowledge and understanding of the subject matter, creativity, and innovation in instructional strategies, emotions, and ethical-moral considerations. This applies to both offline and online teaching. Although online teaching is not alien to education now, it is not similar to the offline environment, so delivering the content, engaging the students in the learning process, and providing reinforcements and feedback demand special teaching skills and abilities. With this changing paradigm in the modes of teaching,

providing practical and quality online education remains a challenge to pre-service teacher education (Kan *et al.*, 2022). However, Pre-service education can potentially develop these skills and abilities through theoretical and practical activities during teacher training programs. The National Policy of Education (NEP) 2020 emphasises "the use of technology platforms such as SWAYAM/DIKSHA for online training of teachers will be encouraged so that standardised training programs can be administered to large numbers of teachers within a short period." These platforms can be used to develop PSTs' professional skills and abilities. Disruptive technologies, i.e., Artificial Intelligence, virtual reality, simulation, and augmented technologies, are a reality, and their emergence is transforming the teaching-learning process. PSTs' adaptation of online digital platforms, i.e., Google Meet, Zooms, Google Classroom, Microsoft Teams, and other digital resources, make them more resourceful and practical in online and offline classes (Vancell, 2021). Understanding these resources can develop the ability of the PSTs to design and implement online lessons effectively in the classroom.

During the COVID-19 pandemic, various institutions, including our department, adopted different online strategies to continue teaching-learning activities smoothly. At the initial stage, the teacher educators were neither prepared nor skilled to use online platforms to teach PSTs virtually. The short-term courses, workshops, and faculty development programs organised by various institutions trained teachers to teach virtually and learn new pedagogies synchronously with the situation (Saboovala & Mishra, 2021). The institutions have also organised different programs to train the students to use online technologies in their learning. These courses developed the required skills among the PSTs to use online technologies effectively and efficiently in their learning process (Kulal & Nayak, 2020). The PSTs attended the theoretical classes and conducted practicum activities online during this period. The PSTs taught the students online during the four-month-long school internship program to the assigned classes of the school.

During this period, educational institutions asserted the need to utilise virtual technological tools to continue teaching and learning in the post-pandemic era. UGC, the governing body of higher education in India, allowed institutions to teach up to 40% of the syllabus online while the remaining 60% offline, and the examination for both 40% online and 60% offline could be conducted (UGC, 2021).

Thus, the PSTs' flexibility and resilience to adapt to new paradigms helped them to cope with the changing situation in the academic environment (Bordoloi *et al.*, 2021). PSTs equipped with these technological tools of teaching-learning may be able to handle the educational environment better. They can utilise creative and innovative approaches and strategies to create a flexible and interactive learning environment in online education.

Review of Literature

The popularity of online classes increased manifold during the COVID-19 pandemic. Technological advancement and students' demand for online classes have encouraged universities and colleges to commence online classes for various courses (Kulal & Nayak, n.d). Several studies have been conducted on online teaching-learning environments and their effectiveness worldwide. The consensus shows that learners' satisfaction and success in using online teaching-learning environments (Marc, 2007; Fedynich, 2014; Rahayu & Wirza, 2020; Saboovala & Mishra, 2021; Vancell, 2021; Kan *et al.*, 2022; Anderson *et al.*, 2022). Online classes offer various advantages to students and teachers, such as flexibility in time and place, enriched and interactive learning materials, removal of barriers to student participation, interactive discussion forum, motivation and feedback, alternative instructional approaches, cost-effectiveness, individualised instructions, and self-paced learning (Marc, 2007; Fedynich, 2014; Rahayu & Wirza, 2020). Aithal and Aithal (2021) said that besides convenience, anytime, anywhere, low cost, and self-paced learning, it also promotes deeper cognitive engagement, reflective thought process, and information processing. Rahayu and Wirza (2020) asserted that all the stakeholders should support and collaborate to get the maximum benefits of the Online TLP.

Despite its advantages, it has disadvantages also, i.e., the PSTs may experience feelings of isolation, lack of interactions, learning distraction, and lack of activities (Todd, 2020; Batman *et al.*, 2021; Hogan *et al.*, 2022; Anderson *et al.*, 2022). Todd (2020) highlighted that online teaching can result in students becoming distracted due to the availability of non-educational content, reducing their focus and motivation. He also reported that PSTs struggle to create interactive and engaging learning materials and lack immediate feedback and non-verbal cues from students.

Thus, despite having excellent academic knowledge, if PSTs lack the digital skills and abilities needed in a digital environment, it will be difficult for them to teach effectively in online classes. Additionally, PSTs' lack of skills and abilities is a significant limitation to using digital technologies for effective teaching-learning (Fedynich, 2014; Vancell, 2021). The absence of physical classroom interaction limits the student's hands-on experiences. This is particularly true in those subjects that require practical, hands-on activities, such as science, where laboratory work is necessary (Vancell, 2021). Teachers must be aware of the recent developments in TLP, which can be used to match particular teaching procedures to students with particular needs (Mikolov, 2010).

The above discussion illustrated PSTs' experiences of online teaching in the light of several studies. Their experiences are multifaceted, with positive and negative aspects, i.e., technological adoption, student engagement and motivation, lack of practical activities, collaboration and mentoring, reflective practices, and professional growth. The literature review underscores the need for enhanced teacher training programmes,

which also focus on integrating digital technologies into various dimensions of education: teaching-learning, assessment-evaluation, feedback-reinforcement, and management-administration.

The objective of the study

The primary objectives of this study are:

1. To determine the PSTs' perceptions of the online teaching-learning environment.
2. To trace the problems PSTs face during the online teaching-learning environment.

This research tries to explain students' opinions on the problems faced, accessibility, students' behaviour, assessment of students' progress, time management, privacy, and health issues during online teaching.

Methodology

Sample

This is an exploratory study obtaining students' perceptions of online teaching experiences. Data is obtained from those PSTs who have undergone online teaching-learning due to the pandemic restraint. The sample comprises 67 PSTs from the Department of Education, AMU Centre Murshidabad. All the students participated in the Online TLP during the COVID-19 pandemic in their graduation or post-graduation program. So, their opinions and views can significantly contribute to designing online learning activities. The sample size of this study is small, but the sample size does not matter for the representation of opinions and views.

Procedure

The PSTs shared their opinions on a Likert-type scale with 19 items containing five options: strongly agree, agree, cannot say, disagree, and strongly disagree. Besides this, the tool also sought their opinions in written form on issues they faced during the online classes. The research contained two parts: (a) 19 Likert-type items related to various issues of the online classes, (b) the second part of the tool asked students to write down the problems they faced during the online classes, and The PSTs were asked to reflect on the Online TLP in light of their experiences.

Data Collection and Analysis

An online tool with the three categories mentioned above was used to collect the data from PSTs. The data collected was analysed using the SPSS tool. PSTs' open-ended responses related to the problems faced by the PSTs and their suggestions were analysed by identifying the emerging theme and pattern of the online teaching-learning environment (Sendang & Duran, 2012).

Demography of the Participant Teachers

Table 01 shows the demography of the participant PSTs. The number of male and female participants is 42 and 25. Regarding the place of residence, 47.7 % of students belonged to rural areas, whereas 52.24% belonged to urban areas.

		N (%)
Gender	Male	42(62.68)
	Female	25(37.31)
Place	Rural	32(47.76)
	Urban	35(52.24)
Major Teaching Subject	Science	15 (22.38)
	Social Science	31(46.27)
	Language	16(23.88)

In the case of teachers teaching subjects, 23.88 % of teachers were teaching different languages (Bengali, English, Arabic, and Hindi), followed by the teaching subject of social science (46.27% of teachers), while 22.38 % of teachers were teaching mathematics and science in their schools.

PSTs' perceptions

PSTs were categorised into the groups who strongly agreed, agreed, stayed neutral, disagreed, and strongly disagreed based on the scores they received through the perception tool. As discussed above, 67 PSTs participated in this study. The table shows the PSTs' responses to the Online TLP.

Table 2. Question-wise PSTs' responses					
Items	Score (%)				
	SA	A	NR	DA	SDA
Opinions regarding Teachers' participation in the Online Classes					
The teachers take classes regularly online.	47.8	22.4	19.4	3.0	7.5
Teachers always mute the students at the time of online classes.	40.4	14.9	14.9	20.8	4.0
The teachers always prepare and share the learning material with students during online classes through screen share.	28.4	26.9	26.9	9.0	9.0
The teacher always encourages us to ask questions during their online classes.	49.3	19.4	11.9	6.0	13.4
The teachers always share the learning materials through online resources (WhatsApp, Google Classroom, email)	43.3	23.9	16.4	9.0	7.5
Opinions regarding students' participation in the Online Classes					
I regularly attend online classes.	29.9	25.4	23.9	16.4	4.5
I joined the class and did other work by switching off the video.	11.9	55.2	3.0	18	12
The online classes demotivated me to participate in the teaching-learning process.	4.5	20.9	29.9	16.4	28.4
Interaction with teachers is reduced during the Online TLP.	21.5	40.6	15.5	13.5	8.9
Benefits of Using the Online Classes					
Online TLP is better than offline classes.	19.4	40.3	26.9	7.5	6.0
The online mode helps teachers explain the concepts better than offline classes.	17.9	25.3	29.8	11.9	14.9
The teachers can assess our progress more effectively online than offline.	14.9	20.9	23.9	26.9	13.4
Through online teaching, educational objectives can be achieved.	13.4	23.9	44.8	13.4	4.5
The online classes demotivated me to participate in the teaching-learning process.	4.5	20.9	29.9	16.4	28.4
Online classes provide a new paradigm for the use of technology in the process of learning	55.2	22.4	11.9	4.5	6.0
Use of various tools like Google Classroom, Google Meet, Zoom Meeting, etc. are very easy for joining meetings and sharing texts during classroom discussion	38.8	31.3	16.4	9	4.5
Issues Related to the Online Classes					
Students feel loneliness due to a lack of face-to-face interaction	19.4	32.8	28.4	9.0	10.4
Group study is one of the important parts of the teaching-learning process, but it is not possible online.	31.3	26.9	17.9	10.4	13.4
The relevant learning materials are not available online mode.	17.9	17.9	26.9	17.9	19.4
Due to the continuous use of online classes, students started feeling some health issues (such as headaches, tiredness, eye problems, mental fatigue, etc.).	29.8	24.3	11.9	22.1	11.9

Data analysis revealed that teachers' regularity in taking online classes, preparing the teaching-learning materials, and encouraging students to participate and ask questions had high appraisal from the respondents. However, in terms of teachers' participation in the Online TLP, the respondents indicated that teachers were regular (70% strongly agreed and agreed), well prepared (55% strongly agreed and agreed), motivated and encouraged (69% strongly agreed and agreed) students to participate in the teaching-learning process. However, one problem, as pointed out, was that teachers usually used to mute the students during the class (55% strongly agreed and agreed).

Regarding students' participation in the Online TLP, the majority (55 % strongly agreed) attended the class regularly. At the same time, they also indicated that while attending the class, most of them simultaneously (67 % strongly agreed and agreed) did other work by switching off the video. Students also pointed out (62 %

strongly agreed and agreed) that they felt reduced interaction with their teachers in the Online TLP, which might be a demotivating factor in the classroom.

The respondents were very assertive (60% strongly agreed and agreed) regarding the benefits of the online classes and agreed that the online mode is better than the offline mode. They mentioned (70% strongly agreed and agreed) that they learned and benefitted from using various tools like Google Classroom, Google Meet, Zoom Meeting, etc., and got familiar with the new education paradigm. However, the issue highlighted here was that the online teaching mode might not be helpful (62% strongly agreed and agreed) in achieving the objectives. Regarding assessment, 40% disagreed, and 24 % disagreed about its effectiveness.

In terms of issues faced by students during the online classes, 52.7% of the respondents agreed that "students feel loneliness due to lack of face-to-face interaction for students," 58.2% agreed that the group study is not possible online, which is a crucial teaching-learning, an almost equal number of respondents supported and opposed the "the relevant learning materials are not available online." 54.1% of the respondents also complained that they faced various types of health issues, i.e., headaches, tiredness, eye problems, mental fatigue, etc., due to the continuous use of online classes.

Issues related to the online teaching-learning environment

This section is related to the pre-service teacher's opinions on issues related to online classes. The respondents were asked to write about the problems they faced or thought might occur during the Online TLP. 67 PSTs participated in this study. However, 18 PSTs did not respond. Thus, the effective number of PSTs participating in this study was 48. Effective respondents highlighted various problems, which are categorised in Table 03

Table-03. Categorisation of teachers' reflections on the Online TLP.		
Issues identified by teachers	Effective Responses of teachers (N=48)	
	In number	In Percentage
Network, battery, and power supply	28	58.33
Accessibility of the digital devices	17	35.42
Teaching-learning environment	20	41.67
Time management at home and privacy	10	20.83
Lack of Motivation	26	54.17
Lack of interaction with peers and teachers	14	29.17
Health issues	19	39.5

The respondent pointed out some serious issues in online classes, such as "network, battery, and power supply" in their response. In percentage, it is 58.33%. These PSTs identified that the network is one of the biggest problems in the online teaching-learning.

The affordability of digital devices was another issue identified by the respondents. It hinders the Online TLP. 35.42% of respondents pointed out that they face the problem of the availability and affordability of digital devices. Several respondents mentioned that they cannot afford a good smartphone or other digital devices due to financial constraints. A respondent said, "*The biggest problem I am still facing is the internet and lack of gadgets*". An interactive teaching-learning environment is essential for effective learning, but several respondents (41.6%) complained that the teaching-learning process was not good during online classes. This issue is directly related to the teaching-learning activities in the classroom.

The major components of the teaching-learning environment are the teacher, students, teaching approaches, and assessment and evaluation. Respondents wrote that the online teaching-learning activities were mainly teacher-centered. Consequently, students feel demotivated and lose interest in online classes. Sometimes, when the teachers were teaching online, students were not attentive. One respondent wrote, "*The teachers do not know whether the students are attentive or listening. Sometimes, students join the class and are left for other work. Sometimes, students sleep during lectures due to a lack of interest. Teachers have no idea about that*". Another respondent wrote, "*Teachers do not have sufficient skill to teach in the online environment*" while another respondent wrote, "*Teachers are not highly tech-friendly, which creates problems not only in the teaching-learning process but also in sharing learning materials*". Another important aspect of the teaching-learning environment is assessing and evaluating the student's progress. Generally, the teachers use the old offline techniques online to assess and evaluate students' academic progress. The online mode of education is very different from the offline mode. Therefore, offline assessment and evaluation techniques would be ineffective online. One student wrote, "*In the online mode of education, student's progress is not properly judged by the teachers.*" Another student identified evaluation strategies and doubt clearance as two crucial issues.

The offline classes have fixed schedules and places; however, the participants can attend online from anywhere. This advantage of online classes creates problems sometimes. 20.83% of respondents reported this issue. At home, they have other responsibilities and other family members, such as small kids and household work,

which sometimes disrupts or hinders them from attending online classes. One respondent wrote, "*I am residing at home and completely indulge in household activities' and could not follow the timetable mostly*". Not all students have big houses with many rooms. Another issue is the availability of a proper place for study. Sometimes, family members live in one room, so studying in that environment is a big challenge. Another student writes, "*Not everyone has a separate study room, and while studying at home, chaos can be one of the drawbacks*".

Motivation is the biggest drive to participate in teaching-learning activities and perform academically. Most (54.17%) respondents reported a lack of motivation during online classes. One of the leading causes of this is the absence of face-to-face interaction with teachers and other students. One respondent wrote, "*In online teaching mode, we cannot interact with classmates and teachers. This thing demotivates us to participate in online activities*". The respondents' responses show increased screen time during online classes may cause health issues. (39.5%) of respondents claimed that they faced headaches, eye pains, tiredness, etc., due to increased time in front of the screen.

Discussion

The PSTs' responses show various issues and challenges the teachers and students encountered in their Online TLP. The PSTs feel that the online classes do not fulfil their educational and emotional needs. Most PSTs believed that the shifting to an Online TLP was acceptable due to unprecedented and unavoidable circumstances like the COVID-19 pandemic. However, it could not be a substitute for offline classes. The teacher and students face technical issues in handling digital devices in teaching-learning. Therefore, many PSTs believe the traditional teaching method is better for effective teaching (Kulal & Nayak, 2020). A continuous one-to-one interaction is not possible in online classes. Lack of face-to-face interaction, network problems, and other technical issues can create a communication lag between teachers and students. However, communication is crucial for teachers to create a bond with students and understand their needs in online teaching-learning. Thus, inadequate face-to-face interaction adversely affects students' emotional development, emotional intelligence, and interpersonal and other soft skills (Jelinska & Paradowaski, 2021). During the COVID-19 pandemic, teachers and students sat 6-8 hours daily in front of the screen. Consequently, this situation led to irritation and decreased patience among students and sometimes teachers. In the COVID-19 pandemic era, this thing can be controlled through the blended mode of teaching, a combination of face-to-face and online teaching-learning instructions. This model is also called the hybrid mode of teaching; it allows teachers and students not always to be glued to digital devices for their TLP. Teachers always felt that in online teaching, they were talking to the screen and could not read students' faces. Sometimes, students join the online class but do some other work, which is a different way of bunking a class. The students joined the online class and left their mobile phones in one corner. The teacher repeatedly took the students' names, and they never replied because they were not attentive. This shows the students' lack of interest in the online classes. The student's interest can be generated if the teacher makes the online class more interactive. A Constructivist approach can help teachers generate this type of classroom environment. In a constructivist approach, a teacher's role is to work as a guide, facilitator, collaborator, co-operator, and friend for students, including providing information.

Conclusion

This research aimed to understand the PSTs' experiences and opinions about using online classes in their teaching-learning process. They appreciate online classes' flexibility, resource availability, and creativity and innovation opportunities. They are also aware of the issues and challenges the online classes pose: reduced interaction, difficulty in student engagement, lack of digital devices, time management and lack of practical teaching experiences. There is a need for more systematic, collaborative, and planned approaches to realise the full potential of online TLP. Because online classes demand continuous learning of something new, new means new skills, behaviours, beliefs, and ways of interacting with students (Mikolov, 2010), therefore Instead of focusing on the negative aspects of using Online TLP, we should strengthen the partnerships among different stakeholders of education (Todd, 2020; Batmang et al., 2021; Hogan et al., 2022). The potential of this partnership offsets the stress caused by missing face-to-face interaction among the students and teachers (Hodges et al., 2020). This way, teachers and other education stakeholders can enhance their pedagogical style and quality by providing support, guidance, and a helpful hand.

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