

## ONLINE TEACHING-LEARNING DURING COVID-19 PANDEMIC: STUDENTS' PERSPECTIVE

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### ABSTRACT

Considering the sudden shift to online teaching due to COVID-19 pandemic, a qualitative survey was conducted on 408 students to uncover their perspectives on online teaching-learning. The data, collected by questionnaire, were analyzed, using percentage and frequency. Results indicated that students were enjoying online learning. Flexibility was found to be the most liked and poor network and connectivity, the most disliked elements of online learning. Adding to it, lack of interaction, distractions and one-sided learning were mentioned as its disadvantages. Online safety and security issues were not addressed and disabled students experienced teachers' negligence and lack of support.

**Keywords:** Online teaching-learning; COVID-19 pandemic; students' perspective.

### 1. Introduction

A big concern amid COVID-19 pandemic and the ensuing lockdown is education, which is at standstill affecting learning of millions of students worldwide. In the absence of any medical treatment and vaccine, social distancing emerged as a potent mitigating factor. The public places across nations have been shut to prevent the spread of this deadly disease and amid all, institutionalized education becomes the biggest casualty. Schools and higher education institutions across the globe have been shut, impacting the learning of over 90% of world's student population (UNESCO, 2020). As per UNESCO estimates, COVID-19 related closure impacted the study of 1540 million students across 191 nations (UNESCO, 2020). In India COVID-19 related educational institutions closure affected the learning of over 320 million students (UNESCO, 2020).

Acknowledging the role that education plays in the all-around and inclusive development of individuals as well as nations, learning of learners of all ages and stages must be safeguarded. Thus, as a response government across nations including India emphasized and encouraged the use of online resources to support students' learning. Education through online teaching becomes a new normal for India though it is fairly a very new concept for majority of students and teachers. A sample survey on "Household Consumption on Education in India" conducted by National Statistical Office (NSO) revealed that availability of computers and internet facility was very low in India. Internet facility was available to only 23.8% of India's population (NSO, 2019). As per NSO Sample survey, a huge divide exist between rural and urban population in terms of owing computer and accessing the internet. Only 4.4 % of rural household had computers while 14.4 % had internet facility (NSO, 2019). In urban areas, 23.4 % of households own computers while 42% had internet connections. This weak internet connectivity and lack of wider reach makes learning through online teaching inaccessible, unproductive and unworthy to many Indian students. This infrastructural inaccessibility leads to ineffective and unequal distribution of learning that creates obstacle in providing quality learning for all.

#### 1.1. Online teaching-learning: Students' perspectives

The pandemic- induced lockdown forced colleges and schools to shut down their campuses and amid this a new reality; online teaching has emerged as a potent tool to support students' learning remotely. To continue the wheels of learning, institutions, worldwide, are switching to online mode of teaching and learning. The practical usage of video conferencing platforms such as WebEx, ZOOM, Google Meet, Say Namaste, as well as learning management systems like Moodle, Blackboard etc. have been encouraged to support students' learning in all possible manner during lockdown. However, this abrupt and unexpected shift to online mode of teaching, while internet is available to only 23.8% of India's population (NSO, 2019), and in context where large numbers of learners come from disadvantaged areas or homes, internet accessibility and unaffordable technology is more likely to make learning beyond the reach of many desirous students.

The biggest challenge confronting us is to make learning accessible and worthy to students of all ages and stages in this moment of crisis. Understanding students' practicalities and their preferred ways of learning online helps

us align technology and pedagogy in tune with students' interest and learning preferences. The idea that technology users have clearly defined preferences towards the use of technology, and so adoption of technology is an undoubtedly rational decision (Schoonenboom, 2012). Some people may have strong preference for technology, but this is not the absolute fact. Enthusiastic but uncritical use of technology is not a rarity; use of technology is also regarded as following the trends (Wang, 2010). Some people may be indifferent or may resist technology adoption (Sanford & Oh, 2010).

Many factors influence students' satisfaction with online teaching. This includes interaction between students and teachers, interaction with fellow peers, content, delivery method, technical support and support services. (Roberts et. al., 2005). Technological know-how and certain level of comfort with computer and internet technologies is the prerequisite for learners to benefit from online instructional activities (Motteram & Forrester 2005; Rodriguez, Ooms & Montanez, 2008). Other factors that influence online learning include accessibility and affordability of computers as well as stable internet connection with good speed as supported by many research findings (Atack & Rankin, 2002; Billings et al., 2001; Scollin, 2001). Inaccessibility of computers and internet technologies combined with lack of technical skills may cause computer anxiety (Loyd & Gressard, 1984), and also impairs learning (Cheurprakobkit, Hale, & Olson, 2002). Researchers found that the effective online learning required both access and technical know-how (Rodriguez, Ooms & Montanez, 2008).

Students' satisfaction with online classroom is determined by students' lived experiences of the online classes (Thurmond et.al., 2002). Satisfaction results from quality teaching and learning in online environment. Studies supported time factor as a vital element in online teaching and learning and reflected that flexible study time and use of multiple sources of media to supplement instruction also affected students' online learning (Thurmond et al., 2002; Dawyer, 2003; Rodriguez, Ooms & Montanez, 2008). Interactive and engaging course design by using graphics and text with learners having multiple options to respond also influences students' satisfaction with online learning (Song et al., 2004).

Concerns have also been raised about the opportunities and quality of interaction between instructors and fellow peers being provided in the online platforms (Roblyer & Ekhaml, 2000; Howland & Moore, 2002; Petride, 2002; Vonderwell, 2003). Human to human social connection and relationship is also missing in online learning making learners deprived from the benefits of learning with peers (Vonderwell, 2003; Sit et. al., 2005). Many studies supported the view that lack of direct communication might also cause a feeling of isolation and loneliness among learners using online learning platforms (Bullen, 1998; Hara and Kling, 2000; Zembylas et al., 2008). For students, the biggest advantage of online learning is convenience and flexibility while biggest disadvantage is lack of interaction (Cole, Shelley & Swartz, 2014). Study of Friesen and Kuskis (2013) indicated that improved interaction between learners and instructors might result in increased students' performance, satisfaction with online learning and positive emotions associated with success. Studies showed that students with sense of community in online learning environment often reported higher level of satisfaction and improved learning outcomes (Richardson & Swan, 2003; Moisey, Neu, & Cleveland-Innes, 2008).

On a positive side, online learning environment increases access to material and offer learners flexibility to learn at a pace, place and time suited to them (Chizmar & Walber, 1999; Smith et.al., 2005). E- learning platforms offers students multiple options to access information and communicate with peers and teachers, this flexibility and control makes them self-motivated and self regulated learners (Smith & Limniou, 2010). Online learning platforms also offers enriched learning experiences and help students becomes independent and self-directed learners (Singh, O'Donoghue & Worton 2005). Researches explore that online learning puts the onus of learning on students which increases their sense of responsibility and sense of control over their learning (Howland & Moore, 2002; Holley & Taylor, 2008).

In online learning environment, the traditional classroom lectures are replaced by web-based learning material and resources. As a learning tool, web-based technologies provide students with flexibility to learn at their own pace and at the time most suited to them. ((Heidari & Galvin, 2002; Rouse, 2000; Kozlowski, 2002). Online learning environment also provides students with opportunities to learn the skills of creative thinking and problem solving (Sit et. al., 2005). The online learning designs also encouraged students to be responsible for their own learning and develop competencies and confidence to deal with difficult situations (Sit et. al., 2005). Instructors' accessibility, prompt feedback and clear instructions in terms of performance and learning expectations from students are found to be the key elements of learners' progress in online teaching and learning. (Hara & Kling, 2000).

E-learning platforms make information access convenient. It is found to be flexible in adapting to the needs of learners and its wider reach opens the door of quality learning for many learners (Poole, 2000; Soon et al., 2000; Cuellar, 2002). Online learning platforms develop deep level of understanding about subject matter (Petrides,

2002). It encourages, facilitates and develops creativity and higher level cognitive functioning (Petrides, 2002; Womble, 2008). Online learning is a new, exciting and dynamic experience for the learners which improves their learning as well as their academic performance i.e. their exam results (Smaldino, 1999; Leonard & Guha, 2001). Researches on computer mediated communication indicated that this method positively affected students' learning on both affective and cognitive level (Beauvois, 1992; Warshauer, 1996; Bonk & Cunningham, 1998). In Indian context, online teaching is a relatively new phenomenon as compared to traditional classroom teaching and this COVID-19 induced sudden lockdown made the transition to online teaching more cumbersome and unworthy to many learners. Meaningful online learning and teaching needs proper planning to cater diverse needs of students. Compromise in this planning leads to unproductive learning, resulting in non-accomplishment of learning objectives and learning outcomes. This sudden but much needed shift lacked this planning and analysis of students' needs and skills. Affordability and accessibility of computer and internet technology to vast majority of India's population combined, with lack of comfort and support; and familiarity with technological tools, may make learning unworthy, time-consuming and stressful to many learners. Online learning has also not undergone the same scrutiny as classroom teaching and researches on online teaching demonstrated mixed results (Ryan et al., 1999; Kenny, 2002; Atack and Rankin, 2002; Kozlowski, 2002). Amid this unprecedented crisis, there is a timely need to assess the efficacy of online learning to see whether the intended objectives of using online learning to support students' learning is achieved or not.

One way to assess and improve the efficacy of online teaching and learning is to understand students' perspectives on online mode of learning and to make changes in teaching-learning process accordingly. What are students' preferred multimedia modes? Students' preferences for online versus classroom teaching; what are students' preferred modes of interaction? Students' preferences regarding content delivery and mode of presentation. Reliable answers to these questions help teachers align content delivery and course material in tune with the students' needs and interest thereby making learning worthy and enjoyable in this moment of crisis. The present study is a humble effort in this regard.

### *1.2. This Study*

The present study is intended to uncover students' perspectives of learning through online mode necessitated due to COVID-19 induced closure. Students' experiences of this new teaching and learning method in this unprecedented time plays a key role in designing online learning experiences joyful and worthy for students. Considering the fact that students' satisfaction with learning experiences can influence their learning (Ramsden, 1991; Espeland & Indrehus, 2003), this study is undertaken to assess online learning experiences of students amid this harsh reality of COVID-19.

Since the pandemic induced lockdown forces many colleges to adopt online instructional mode, it is necessary that this sudden and unexpected transition to online mode makes this new learning experience enjoyable, meaningful and supportive for students' learning. Therefore, to address the aim of the study, following research questions were formulated:

- What are the experiences of students concerning online learning during COVID-19?
- What technological platforms students are using for online learning?
- What are the students' preferred content delivery modes?
- What are the students' perceived advantages and disadvantage of online learning?

## **2. Methodology**

### *2.1. Design and Sample*

A qualitative survey was used to examine the online learning experiences of students from undergraduate teacher training course during COVID-19 crisis. A sample of 408 students from Manipur University, Aligarh Muslim University and their affiliated colleges and centers was selected by using convenient sampling technique. The demographic details of the participants are given in table 1.

**Table 1:** Demographic Details of Participants

Areas	Categories	Numbers	Percentages
<b>Gender</b>	Male	170	41.7%
	Female	238	58.3%
<b>Area of Residence</b>	Rural	240	58.8%
	Urban	168	41.2%
<b>Age Level</b>	Below 20	0	0
	20-30	362	88.7%
	31-40	40	9.8%
	Above 40	6	1.5%
<b>Disability</b>	Yes	12	2.9%
	No	396	97.1%

## 2.2. Materials

The experiences of students were collected by using a questionnaire on online learning during COVID-19 outbreak that consists of two sections. First section comprised of demographic details of participants and second section dealt with statements and questions related to their experiences of online learning initiated by their respective institutions and teachers. Both open ended and closed questions were included along with check boxes. The questionnaire was designed considering the ease of responding to the question and inclusion of important points related to online learning such as enjoyment and comfort of online learning, digital platforms and devices used, most liked and disliked elements of online learning, content delivery modes used by teachers and those preferred by students, accessibility of internet, advantages and disadvantages as perceived by students. It was prepared to be appropriate for respondents and relevant to the local context. This questionnaire was prepared in Google Form and sent to participants through emails and social networking sites and apps.

## 2.3. Data Collection Procedure

Data were collected during mid-April and mid-May, 2020 when all institutions of India had switched to online mode of teaching due to corona virus pandemic. The questionnaire was sent through email and WhatsApp to students with request letter for their responses. It was sent to all enrolled students and 408 responses were received.

## 2.4. Data Analysis

The collected data were analyzed qualitatively by using frequency and percentages for close ended questions and check boxes. The open ended questions were analyzed using content analysis. The filled narrative responses were read, coded and categorized in different themes as per the words and phrases used by students.

## 3. Result and Discussion

The total collected responses were 408 in number. To examine the experiences of students concerning online learning and to find out the answers to stated research questions, the findings are presented in the sequence of questions or statements of the questionnaire.

### 3.1. Enjoyment with online learning during corona virus crisis

**Table 2:** Enjoyment with Online Learning

Enjoyment	Frequency	Percentage
<b>Yes</b>	292	71.6%
<b>No</b>	116	28.4%

In respect to the first question, majority of students (71.6%) were enjoying online learning initiated by their teachers and institutions (Table 2). It is encouraging to know that students enjoy online learning during this tough time. It means that this innovative way of learning is highly enjoyable for students. This enjoyment may prove to be leading to positive and meaningful learning for students.

### 3.2. Digital platforms used for online learning

**Table 3:** Digital platforms used for online learning (n=408)

Digital Platforms	Frequency	Percentage
Zoom	218	53.4%
Google Classroom	102	25%
Google Hangouts	4	1%
WhatsApp	268	65.7%
Facebook	30	7.4%
You Tube	16	4%
Others (Telegram, Edx, Udemy)	4	0.5%

In most cases, institutions might be offering online teaching on different and multiple platforms. Considering this point, students were allowed to choose all platforms they were using. Each frequency and percentage of table 3 was calculated out of total number of responding students. Majority of students (n=268) were using WhatsApp for online learning followed by Zoom (n=218), Google Classroom (n=102) and Facebook (n=30). WhatsApp might be considered as one of the easiest tools to use for asynchronous learning experiences that is flexible and easily accessible and handled by students as well as teachers. The very unfamiliar video conferencing app 'Zoom' made its grip stronger in connection to online teaching and learning in the entire world. On directives of authority, many educational institutions in India started teaching through Zoom. It is reflected through table 3 that 53.4% students were using this app.

### 3.3. Devices used for online learning

**Table 4:** Devices used for online learning (n=408)

Devices	Frequency	Percentage
Mobile Phones	400	98%
Computers (PC)	4	1%
Laptops	60	14.7%
Tablets	2	0.5%

Similar to online platforms, students were using different devices for online learning. Therefore, students were asked to respond for all devices they were using. Table 4 shows that out of 408, 400 students were using mobile phones for online learning followed by laptops. Computers and laptops were rarely used by students. It is mentioned earlier also that majority of students do not possess computers and laptops. The reports of NSO (2019) stated that only 4.4% rural and 23.4% urban households own computers.

### 3.4. Most liked features of online platforms

This open ended question was analyzed using content analysis. The narrative comments were segmented into different categories or themes.

**Table 5:** Most liked features of online learning platforms (n=408)

Top five most frequently liked features of online learning	Percentage
Flexibility	30%
Accessibility of content materials	25%
Interaction with teachers and peers	22%
Comfort	21%
Self-paced	14.21%

While analyzing the most liked features of online learning platforms, it was revealed that 30% students found it highly flexible in terms of time and place. Its flexibility makes online learning highly demanding. Out of 408, 25% students liked its feature of providing accessibility to content materials. In table 3, it was reflected that Zoom, a video conferencing app, was used by 53.7% students, but in terms of interaction, only 22% students found online learning interactive with peers and teachers. Very few students found online learning interactive in nature. Students' satisfaction with online teaching is related to interaction between students and teachers, interaction with peers (Roberts et. al., 2005). Out of 408, 84 students (21%) found it comfortable to study from home. Regarding comprehensibility of the content, 10.29% agreed on it. Only few students agreed on its feature

of being low cost (5%) and providing clarification of doubts (1.5%). Some narrative of students are given in verbatim:

*“It has removed gap among students and teachers even during pandemic. My teachers are trying their best and making all efforts to make all students understand the topic and they plan the entire topic in order to help us to gain mastery on the content as they did in classroom teaching.”*

*“Learning through video conferencing offers real-time learning which is fairly similar to the conventional classroom environment.”*

*“I feel comfortable while learning online. I can learn anytime according to my convenience. I can access materials provided by the teachers. It is highly flexible for me.”*

*“An online class is the new experience for me... We can use it at anytime and anywhere. We can connect many people or the whole class at a time. I am enjoying it.”*

*“Materials given, and the time and energy to go/travel to the classroom every day is removed.”*

### 3.5. Most disliked element of online platform they were using

**Table 6:** Most disliked elements of online platforms

<b>Top five most disliked elements</b>	<b>Percentage</b>
<b>Poor network and connectivity</b>	51%
<b>Distractions</b>	16.71%
<b>Lack of interaction</b>	14%
<b>Poor comprehensibility of content</b>	14%
<b>Lack of support</b>	10.78%

Students were asked to give open responses regarding elements they disliked about online learning platforms they were using. Its analyses revealed that more than 50% students faced connectivity and network related issues while learning online. The mentioned responses highlighted the difficulty to get good internet connection and speed for online classes especially in rural areas. Following it, 16.17% students found online learning very distracting because of elements such as noise, poor management, advertisements, etc. As 98% students were using mobile phone for online learning, they found calls in between classes quite distracting. In frequency, distraction was followed by lack of interaction (14%), poor comprehensibility of content (14%) and lack of support (10.78%). It was further found that few students found it stressful (7.35%), lack of proper electricity (6.37%), inflexibility (5.39%), lack of concentration (2.45%), lack of suitable device (2.45%), irrelevant content (1.96%), negligence (.98%) and no feedback (.49%). Some narrative responses are given in verbatim:

*“Our teacher is not fully trained for online teaching...One or two teachers hardly knows how to use the online teaching website/application..Rest is testing on their bad/Home..One of our teacher tried to take online classes on Zoom app only a single time..”*

*“Network issue; We are not getting connected and mostly I face issue in listening teachers’ voice. Sometime two or more students respond at the same time unknowingly and I listen noise only.”*

*“It seemed to have a limit of 45 minutes only per meeting which is quite short as it does not allow us to have an interactive teaching-learning process. Also, there is not enough time for clarification of our doubts and queries.”*

*“The network keeps disconnecting in between the meeting and often the voice breaks due to poor connectivity. Therefore, there are many a times, we don't grasp a single thing in the whole online class session.”*

*“Lack of interaction, no room for clarification of doubts and limitations in expressing one's own opinion.”*

*“Time constraints, limited questioning opportunity.”*

*“What I dislike about this online platform is that we cannot interact directly with the teacher if we want to ask some personal questions.”*

*“Negligence and lack of attention also diverted mind while someone calls or text me.”*

*“Network and audio problem and also not feeling the presence.”*

It was indicated through analyses that the percentage of students, disliking online learning, was more than the features, they liked about online learning. These points give clear indication that teachers should focus on making online learning interactive, comfortable and accessible to all learners. In addition, distractions should be removed by using appropriate modes. Video lectures or classes must be accompanied by supportive materials in order to clarify students’ doubts. Multi-media may also be used to enhance quality of learning by making it interesting and appealing to learners.

### 3.6. Content delivery modes used by teachers (n=408)

**Table 7:** Content Delivery Modes adopted by Teachers

<b>Delivery Modes</b>	<b>Percentage</b>
<b>Teacher-made Text Materials</b>	65.2%
<b>Video conferencing</b>	48%
<b>Textbook or Reference book materials</b>	41.7%
<b>Teacher-made video</b>	20.6%
<b>Video from online source</b>	19.1%
<b>Teacher made audio file</b>	14.7%
<b>Audio from internet</b>	2.9%
<b>Others</b>	4%

On use of content delivery modes adopted by teachers or instructors for online teaching, it was disclosed that highest number of students were provided teacher-made text materials (65.2%) followed by video conferencing, textbook reference materials, teacher-made video, video from online sources and teacher made audio file. The least used mode is audio from internet or other sources. Teacher-made texts and videos are generally tailored in correspondence to the needs and specific features of students. That might be the reason for adopting these modes of content delivery by teachers.

### 3.7. Students’ preferred content delivery modes

**Table 8:** Content Delivery Modes preferred by Students

<b>Delivery Modes</b>	<b>Percentage</b>
<b>Teacher-made Text Materials</b>	53.4%
<b>Teacher-made video</b>	45.6%
<b>Textbook or Reference book materials</b>	44.1%
<b>Video conferencing</b>	35.8%
<b>Video from online source</b>	23%
<b>Teacher made audio file</b>	22.1%
<b>Audio from internet</b>	7.8%
<b>Others</b>	4%

For finding out the students’ preferred modes for content delivery, they were asked to select given options. It was revealed through analysis that the most preferred mode of delivery was teacher-made text materials and videos followed by reference materials, video conferencing, video from other sources and teacher made audio. The least preferred mode was found to be audio files from internet. It was encouraging to note that teacher-made text materials and textbook materials were highly preferred and mostly used by teachers. This connection might prove fruitful in productive and effective learning environment. Another point to note is that 48% students were taught by video conferencing whereas only 35.8% students preferred to learn that way. The reason might be connected to poor internet connection and its associated distractions. Video conferencing needs real time classes that makes it less flexible in terms of pace and time. If less preferred modes are continued to be used by teachers, it might create stress and demotivate desirous students to participate in teaching-learning process.

### 3.8. Comfort with online learning

**Table 9:** Comfort with Online learning

<b>Comfort</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Yes</b>	294	72.1%
<b>No</b>	114	27.9%

In connection to comfort of learning through online mode, it was found that more than 70% students were comfortable in learning online. Regarding enjoyment and comfort, students indicated positive experiences. Their comfort would lead to productive learning.

### 3.9. Accessibility of Good Internet Connectivity

**Table 10:** Accessibility of Good Internet Connectivity

Accessibility	Frequency	Percentage
Yes	194	47.5%
No	214	52.5%

The analysis showed that majority of the students did not have good internet connectivity. This could cause inaccessibility of content materials, poor comprehensibility of the content, distraction and lack of interaction.

### 3.10. Students' perceived advantages of online learning

**Table 11:** Advantages of online learning (n=408)

Advantages	Frequency	Percentage
I can learn anytime according to my convenience	212	52%
I can learn from anywhere	254	62.3%
I can access materials provided by instructors	184	45.1%
It is highly flexible for me	108	26.5%
I feel more autonomous while learning online.	92	22.5%
Teachers are more friendly online than face-to-face teaching	64	15.7%
Proper guidance for online safety and security is given	28	6.9%
Others: Save travelling expenses	4	2%

Table 11 shows the analysis of question number 10 regarding students' perceived advantages of online learning. It is reflected that majority of students (62.3%) found the advantage of learning from anywhere. They needed not to step out of their homes for attending classes. That might be the reason that 52.2% students found it comfortable to learn online. Out of 408, 212 students perceived that they could learn anytime according to their convenience. It is understood that video conferencing is real time based and it is used by 48% teachers for online classes. These students could not enjoy anytime aspect of online learning. The rest could enjoy the asynchronous mode of online learning. These advantages were followed by accessibility of materials given by teachers, flexibility, autonomy, friendliness of teachers and economic. Online learning is quite often coupled with cyber security and safety issues. Before switching to online mode of learning, making users aware of cyber security and safety is a prerequisite. It must be highlighted that only 6.9% students were getting proper guidance for online safety and security. It can be said that this sudden shift has compromised the users' security and safety in online environment. Teachers may provide orientation to students regarding online safety and security. In other advantages, students (2%) mentioned about saving of travelling expenses and their time. It was also mentioned that they could learn along with helping their family with household chores.

### 3.11 Students' perceived disadvantages of online learning

**Table 12:** Disadvantages of online learning (n=408)

Disadvantages	Frequency	Percentage
Poor connectivity	272	66.7%
Lack of time	78	19.1%
Lack of support	36	8.8%
No opportunity for interaction	128	31.4%
No clarification of doubts and queries	74	18.1%
No supportive materials are provided	30	7.4%
No guidance is given for online platform	32	7.8%
Lack of comprehensibility of the concept	60	14.7%
Learning is teacher directed only	40	9.8%
Learning is one-sided	80	19.6%
Others: Stressful and Technical problem	4	1%

After advantages, students' perceived disadvantages of online learning were also analyzed and shown in table 12. It was found that the major disadvantage was poor connectivity. Online learning mainly depends upon



internet connectivity and if it lacks, learning leads to nowhere. Regarding interaction in online learning, 31.4% students agreed that they did not get opportunity for interaction. Online learning was perceived as one-sided by 19.6% students as majority of the talk was done by teachers only. Students lacked time (19.1%) for online learning and their doubts and queries remained unclear (18.1%). Nearly 60 students were unable to comprehend the content being taught in online classes. Comprehensibility of content depends upon the medium through which it is sent. Poor connectivity might be one of the causes of students' lack of comprehensibility. Some students pointed out that they lack support, proper guidance and supportive materials from their teachers while learning online. Few students (1%) mentioned other disadvantages such as technical problems and its being stressful. In studies (Bullen, 1998; Hara and Kling, 2000; Zembylas et al., 2008), it was discussed that lack of communication may cause isolation and loneliness among students using online learning platforms. It is suggested to destress students in this time of crisis through less work load, sense of community, proper counselling and regular interaction.

### 3.12 Use of Online Learning after Outbreak

**Table 13:** Use of Online Learning after Outbreak

Use of online platform after outbreak	Frequency	Percentage
Yes	222	54.4%
No	186	45.6%

The last question was "Will you prefer to use online learning after outbreak also?" Nearly 46% students answered negatively. The reason might be those problems and disadvantages, students were encountering while attending online classes. Adding to it, online learning may be used as a supplement to offline/face-to-face learning as in the case of blended learning and flipped learning. The complete and only use of online mode of teaching and learning is perceived to be distracting and lacking support and interaction with teachers and fellow peers that makes it less effective and more burdensome. Teaching and learning is considered to be a social act. That element remains missing in fully online learning environment, resulting in poor comprehension and lack of support and interaction.

### 3.13 Perspective of students with disabilities concerning online learning

Out of 408, 12 students were disabled. In their context, it was revealed that they found it difficult to adjust with online learning as they were neglected by teachers among the group of non-disabled peers. One visually impaired student was contacted by phone to record his responses. He mentioned about teachers' negligence and lack of support along with lack of suitable materials. It became difficult for them to select relevant information out of all textual conversation done by their teachers and peers. They found materials unsuitable for their specific needs and unproductive. They perceived online learning very distracting as it lacked social presence of teachers and peers. Lack of peer support and peer interaction were found to be the perceived disadvantages of online learning. Social support in classes matters a lot for students' learning and unfortunately it lacks in online learning environment. The social component remains absent in online teaching and makes learning more or less devoid of any social context. Teachers must try to understand the specific needs and problems of students with disabilities in order to include them in online learning environment. Education should be suitable for individual students' needs. 'One size fits all' approach may not be used by teachers and instructors because it may result in making learning beyond the reach of many students.

On the basis of the analysis of questionnaire, the study further suggested to create student-centered online learning environment that is conducive and supportive for all learners in order to facilitate their learning and to provide opportunities for interaction through use of different media and activities. It should be flexible for accommodating students with less technological support to grow according to their own pace and convenience.

## 4. Conclusion & Suggestions

Amidst COVID-19 pandemic, internet has become mitigating tool to rescue education from severe effects of worldwide lockdown and closure. By closing the gates of many educational institutions around the globe, coronavirus pandemic has provided an opportunity to practice digital form of teaching and learning. This much needed but suddenly imposed online teaching started unplanned in hurry to safeguard academic life of millions of students affected by this worldwide pandemic. The analyses of this study showed that students enjoyed learning through online mode, if proper facilities were accessible to them. Flexibility in terms of time and place was found to be most liked feature of online learning. But, at the same time, poor network and connectivity was highly disliked element. Poor connectivity might prove to be the major cause of other disadvantages of online

learning. Based on the findings of this study, it is suggested that necessary technical changes must be made in online learning design to facilitate peer interaction, support and socialization in the online learning environment. Online platforms should be designed in manner that provides opportunities for interaction between teachers-students and students- students because interaction is the key variable that influences the quality of online learning (Phipps, 2015). Collaborative learning method can be used to facilitate interaction among peers, working in groups increase students satisfaction , increases students participation and cultivates social relationship (Tinto, 1997). This study suggested teachers and institutions to strengthen the features liked by their students including involvement and interaction, flexibility, comfort and accessibility of materials and to modify elements that hinder their learning in online environment that include poor network connection, distraction, lack of support and concentration, etc. Further, teachers are suggested to do need-analysis of their students, especially disabled students and to provide instruction accordingly. This study showed that they were neglected in online learning. Regarding interaction in online teaching, it is suggested to integrate multiple media presentation and different activities to make learning more participative for students. Undoubtedly, the major challenge is to make students involved and motivated to learn online where social presence of teachers and peers are lacking. Teachers need to reflect on their adopted techniques and practices and should design it in such a way to match it with students' interest and preferred learning styles. This highly stressful time demands counseling of students on regular interval and to assist them in every possible manner. This study gives insight into the perspective of students regarding online teaching-learning during COVID-19 outbreak. Needless to say that teaching and learning needs to be customized according to the perspective of students and their preferred modes and manners for creating better online learning environment.

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