Students' Experiences of E-Learning Practices During COVID-19: A Qualitative Study

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Abstract—COVID-19 pandemic has disrupted schooling globally. Affecting millions of students, the conventional face-to-face (F2F) education system has been replaced by e-learning overnight. As the advantages, disadvantages, and technical challenges of this abrupt transformation were already well-documented, this study aimed to intensely scrutinize university students' experiences of e-learning practices in this new normal situation. Adopting the Interpretative Phenomenological Analysis (IPA), a smaller sample of respondents (N=25) was observed to gain deeper insights using semi-structured interviews. Data were analyzed and interpreted through thematic analysis. Findings revealed that most of the students have had unfavorable experiences with e-learning. The majority of students feel that e-learning has ruined their social relationships by isolating them from their peers and instructors. A significant number of students were observed to be anxious about their future due to unstable financial status, poor learning outcomes, and unfair evaluation processes. Moreover, poor self-esteem, anxiety, and depressive symptoms have been observed among a significant portion of the students. The overall findings of this study are meant to assist stakeholders in taking the necessary steps to address the aforementioned issues and ensure an improved learning experience, particularly in an e-learning environment.

Keywords—e-learning, experience, Interpretative Phenomenological Analysis (IPA), COVID-19, university students, Bangladesh

1 Introduction

Coronavirus disease 2019 (COVID-19) caused by SARS-CoV-2 were first reported in Wuhan, Hubei Province, China, in late December 2019 [1]. Due to its rapid dissemination across the globe in a short span of time, the World Health Organization (WHO) declared COVID-19 as a global pandemic on March 11, 2020 [2]. As of this writing, this deadly infectious disease has killed about 5,474,766 individuals worldwide, and the number is growing rapidly [3]. Being recognized as an existential threat, countries around the world have started to follow strict public health measures to mitigate the losses of livelihoods [4-6]. As a part of that, globally, e-learning has been accepted

instead of in-person education to prevent the spread of the virus among students. However, this sudden transition has raised many concerns among students about the acceptability of e-learning environments [8]. Although e-learning is not new and was commonly practiced in developed countries prior to the pandemic, the least developed countries (LDCs) and developing countries (DCs) are less familiar with online teaching-learning strategies [7-8]. Consequently, both teachers and students are having trouble adapting to this new normal environment.

In Bangladesh, a nationwide lockdown was imposed from 26 March 2020 [9], which has been extended several times depending on the situation. Simultaneously, in-person education (both public and private) has been closed since March 17, 2020 [10]. Furthermore, considering the situation, the University Grants Commission of Bangladesh (UGC) has allowed public and private universities to take online classes to continue their educational activities. However, the acceptability of this sudden transition is questionable in many ways. Previous studies mainly focused on e-learning adaptation challenges. For example, following a quantitative research approach, a study [13] found that after switching to online classes, students in Bangladesh started to face issues such as lack of prepared-ness, participation, and less scope of classroom activities. The study further revealed that slow internet, interrupted power supply, attention problems, and difficulty with understanding lessons are the major barriers to effective learning on online platforms. Similar findings were found in another study where the author showed inadequate technical infrastructure, limited device or internet accessibility, financial constraints, lack of technical literacy, and psychological inertia among both teachers and students disrupted the harmony of the online learning experiences [14]. Another study claimed students are not ready for e-learning yet, and the majority of them (86%) feel that e-learning has little impact on their learning outcomes and prefer the F2F teaching-learning strategy [15]. Similar findings were found in a study [16], where the authors showed the majority of university students in Bangladesh have rarely benefited from e-learning due to difficulties while participating in virtual classes. In addition, the authors argued students cannot communicate properly with their teachers and peers. So, it seems that e-learning environments often do not foster connectedness with peers and teachers. This isolation can also lead them to have decreased interest in their course, thus, limiting the development of their social skills and cognitive abilities [17], [34]. Thus, the lack of non-verbal cues, low engagement, and the perceived facelessness of online learning lead to misunderstandings and can put off students from participating in-class activities [18]. Another growing concern of online learning is the growing depression and anxiety among students [19]. According to a study [20], learning through online platforms gave rise to depression and anxiety disorders among university students, where the authors found a significant relationship between students' e-learning satisfaction and the prevalence of depression, anxiety, and stress. All the above studies mainly focused on technical challenges faced by students due to abrupt adaptation of e-learning overlooking the depth-understanding of their perceived experiences. Furthermore, in the context of Bangladesh, very few qualitative studies [21-22] were conducted on students' experiences in the e-learning environment.

Undoubtedly, adopting e-learning is the best possible way to continue teaching and learning activities during this crisis [11] and has been found to be positive in several

studies [35-36]. However, the question remains about how the Bangladeshi students experienced this overnight digital revolution? And what situation did they go through after the university closed for on-campus activities?

To answer those questions, this study has adopted Interpretative Phenomenological Analysis (IPA), a well-established qualitative research approach, aiming to explore the insights of students' perceived experiences with e-learning practices during COVID-19. The specific objectives of this study are mentioned below:

- Scrutinizing the insights of students' experiences of e-learning practices, during the COVID-19 pandemic.
- Identifying the key affecting factors of e-learning practices, as suggested by the participants, to make e-learning technologies more effective and useful in the context of Bangladesh.

2 Research methodology

2.1 Study design and settings

This study adopted the Interpretative Phenomenological Analysis (IPA) [23-25], a qualitative research approach [26], aiming to intensely scrutinize students' experiences of e-learning practices during COVID-19. IPA is a well-known technique used exclusively for research where researchers try to examine a smaller sample of respondents to gain deeper insights using semi-structured interviews [27]. The present study was conducted between the 15th July and 30th July 2021 in a leading private university, Dhaka, Bangladesh.

2.2 Study participants

The key participants of this study were university-level students of 6 distinct departments. Purposive sampling was used to select participants who could give rich, relevant, and diverse data relevant to the study question. The participants who have completed a minimum of 2 semesters (8 months) in the online environment were only eligible for the study. The final sample comprised 25 students.

2.3 Data collection instrument and procedure

A one-to-one semi-structured interview designed by qualitative research experts based on IPA. The questionnaire was validated and administered by a panel of experienced professors. The interviews were conducted via google meet between 15th July and 30th July 2021 ranged from 15 to 25 minutes for each, resulting in over 8.8 hours of interview data. The main purpose of the interview was to explore university-level students' experiences associated with E-learning during the COVID-19 pandemic. To do so, the students were mainly asked about involvement with online education, social

relationships with peers and instructors, fairness of the online examination process, perception regarding impacts of pandemic on their degree and career plan, financial and nonfinancial challenges.

2.4   Data analysis

The interviews (mentioned earlier) were recorded and transcribed to an appropriate level of detail [25]. Later, themes and sub-themes were extracted based on sufficient coding processes. Moreover, to explore the qualitative data, frequencies, percentages, and other statistical analyses were performed accordingly.

2.5   Ethical considerations

This study was approved by the Research Ethics Committee (Ref: Ethics/fouad(1)/2021) of Daffodil International University, Dhaka, Bangladesh. The objective of this research was explained to the study participants, and their written consent to participate willingly was obtained. No one was forced to take part in the study, and they were allowed to skip any questions they didn't want to answer. It was also made clear to respondents during the permission process that the obtained data would be utilized solely for academic reasons and that the researchers had no commercial, political, or vested interest in the outcome.

3   Results & discussion

The sample comprised 25 university-level students (Bachelor's level = 80%, Master's level= 20%) from 6 distinct departments of a leading private university of Bangladesh. Demographic data (see Table 1) showed 60% of students were male and 40% were female. The age of the students ranged from 19 to 36 years where the average age was 23.36 years (Std. Deviation = 4.42). 40% of participants were from the urban area, 32% were from the sub-urban area and 28% were from the rural area. Most of the students (92%) were unmarried while a few were married (8%). The findings indicate that in the pre-pandemic period, the majority of students were habituated to face-to-face education (84%) practices and were less (16%) familiar with a fully e-learning environment.

Table 1. Demographic information

Variables	Frequency (n)	Percentage (%)
Age		
<=20	04	16%
21-25	15	60%
26-30	03	12%
31-35	02	8%
36=>	01	4%
Gender		
Male	15	60%
Female	10	40%
Department		
Computer Science and Engineering	02	8%
Developmental Studies	04	16%
English	08	32%
Law	05	2%
Software Engineering	03	12%
Textile Engineering	03	12%
Level of education		
Bachelor's	20	80%
Master's	05	20%
Marital status		
Married	02	8%
Unmarried	23	92%
Monthly household income (Before pandemic)		
<=50000 BDT	14	56%
50000 BDT-100000 BDT	09	36%
100000 BDT -150000 BDT	01	4%
>=150000 BDT	01	4%
Monthly household income (After pandemic)		
<=50000 BDT	17	68%
50000 BDT-100000 BDT	06	24%
100000 BDT -150000 BDT	01	4%
>=150000 BDT	01	4%
Place of residence		
Urban	10	40%
Sub-urban	08	32%
Rural	07	28%
Familiarity with fully e-learning (Before COVID-19)		
Yes	21	84%
No	04	16%

A thematic analysis was conducted to scrutinize students' experience of e-learning practices during the COVID-19 pandemic was done to make the findings compatible with the overall experience of the students and the key factors of their practices. Figure 1 presents the overall thematic map that illustrates the relationships between the themes such as (i) social relationships, (ii) future uncertainty, (iii) financial hardships, (iv) online class, assessment and evaluation, and (v) psychological disorders.
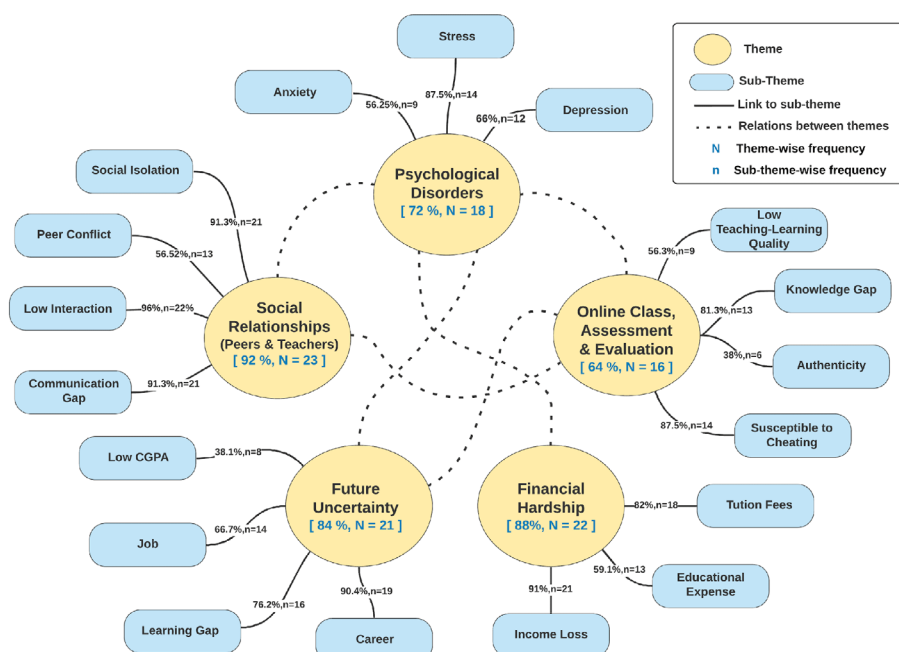

Fig. 1. Thematic relationships (with values)

3.1 Theme-1 social relationships (peers and teachers)

Initially, students were asked whether online classes have influenced their social relationships (intimacy, communication, friendship, interaction, support, co-studying) with their peers and instructors. Almost all students stated online learning has a detrimental influence on their social relationships. In this regard, a 21-years-old undergrad student expressed his feeling such as:

"Online classes have affected my social relationship in many ways. I don't have any direct interaction with my friends and teachers. I cannot hang out with my friends; we cannot seat for group studies – everything is quite boring and artificial."

Some students claimed e-learning has created conflict among students which deteriorated the relationship between them. A 23-years-old undergrad student shared:

"Most of the time, my friends have been arguing among themselves over the inconsistency of online test results. Due to this, personal relationship is going to hell day by day."

Another 26-years-old graduate student stated his opinion as follows:

"I have almost completed my M. Sc. However, I didn't meet any teacher face-to-face. I always feel a communication gap due to a lack of face-to-face interaction."

The above statement makes it quite evident that online education severely damages students' social relationships, especially with their teachers and peers. Consequently, most students feel that online learning is isolating them and creating distance from their close ones (e.g., peers, teachers) by restricting face-to-face interaction and communication.

3.2 Theme-2 future uncertainty

Students were further asked if they were concerned about their future career paths due to the COVID-19 pandemic. Most of the students stated that they are highly concerned about their future while very few didn't make any comment. Students were further asked; do they think the sudden transition to e-learning has hampered the value of their degrees and career plans? In response to this question, most of the students argued that the fully online teaching-learning environment has created a knowledge gap and educational inequality among them. In this regard, a 25-years-old undergrad student expressed his opinion such as:

"Due to the pandemic, I moved to my hometown. Here, cable Internet access is not available. So, I have to buy mobile internet packages which are not enough to access all online learning resources. So, I think those who are living in town and have the opportunity to get cable internet, are getting more access in terms of online learning resources. So, due to this, I'm lagging behind and very much worried about my future."

This is not a single incident; thousands of students have been moved to their village dwellings as a consequence of the pandemic [39] and are experiencing similar issues (e.g., digital inequalities, learning gaps, etc.) [40-41]. On the other hand, a significant number of students were found uncertain about their career paths. For example, a 23-years-old undergrad student expressed his uncertainty as follows:

"To me, face-to-face class is more preferable compared to e-learning. The current situation is hampering the value of my degree and my CGPA is decreasing day by day. I think I am not learning properly. As I want to be admitted into a foreign university after my BSc. I need to maintain a good CGPA. Therefore, the pandemic is hampering my CGPA as well as my career plan."

Another 26-year-old graduate student expressed his worries about the future job market as like:

"If everything goes well, I will complete my graduation at the beginning of 2022. However, I am very much worried about getting a job after my graduation in this situation. Moreover, it's being hard for me to cope with this full e-learning teaching-learning environment."

3.3   Theme-3 financial hardship

Students were asked if they faced any financial challenges to meet educational costs during this ongoing epidemic. The majority of the students responded that they experienced financial problems with their educational expenses whereas only very few reported that they did not experience any problems. On the other hand, prior to the COVID-19 pandemic, participants' average family income was BDT 59,460, which was reduced during the COVID crisis to BDT 43,840. Figure 2 illustrates the significant loss of household income of participants this pandemic and has brought extreme financial pressure on their families.
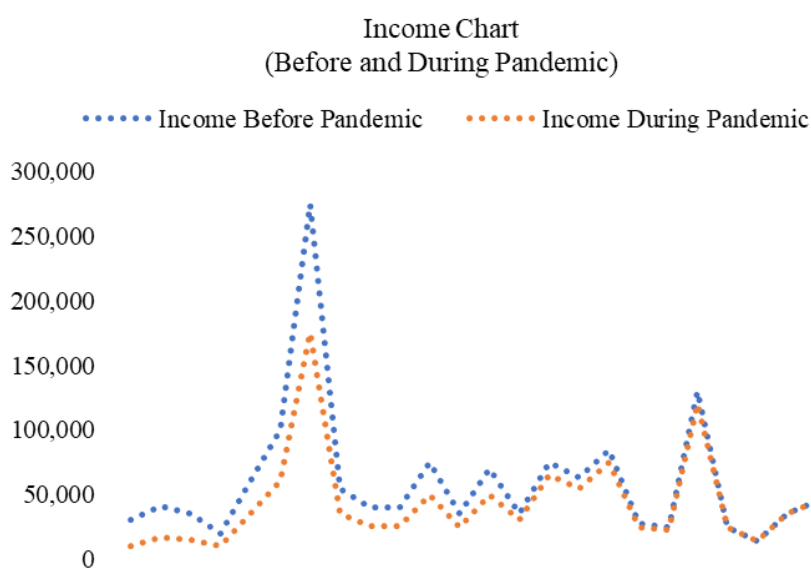

Fig. 2. Income chart (Before and during pandemic)

The students were further asked, "How do their family manage their educational costs during the pandemic?" In response to this question, a 22-years-old undergrad student shared-

"Although daily expenses have significantly increased during the pandemic, my family income has dropped by almost half. I feel very bad whenever I have to talk with my parents about my university fees. Because I know, already they are facing horrible financial challenges."

Another 24-years-old undergrad student stated -

"I am from a lower-middle-class family where my father is the only earning member. However, due to the pandemic, my father's business was completely shut down. We were in a terrible situation and my family was unable to manage my educational expenses. That's why I was forced to drop out of the summer-2020 semester. And now I am covering that dropped semester and how critically my family is managing the cost I cannot explain that in my words."

The above statements highlight the grim reality of managing students' educational expenses during the Covid-19 crisis. In most cases, students were facing the challenge of covering the online education expense due to declining family monthly income.

3.4 Theme-4 online assessment and evaluation

Another key drawback of e-learning is the difficulty in maintaining the fairness of the online assessment and evaluation. Since the online education system was adopted without any prior planning, no preventive / anti-fraud measures were taken to protect the authenticity of the online assessment. Consequently, students' evaluation is questionable in many ways. To make this clear, we asked students to share their thoughts on the fairness of the online exam process and the results they obtained. In this regard, a 22-years-old undergrad student added:

"Online examinations and the evaluation system are very depressing. Most of the students directly copy from various sources and they are getting good grades but my grade is getting lower even after working hard."

Another 27-years-old graduate student stated that:

"I don't think the online testing process is justified at all. Because most of us follow unfair ways which were impossible during direct testing. We are not learning enough and gaining a good CGPA with very limited knowledge. Now maybe our results are getting better but in the long run, this will be a concern, especially in the job market."

The above statements imply that owing to a lack of an anti-fraud monitoring system, students use unfair tactics to obtain good scores during online assessments. However, the copying technique leads students to poor learning results. Furthermore, this unfair practice negatively affects students who honestly participate in online exams.

3.5 Theme-5 psychological disorder

Due to the above issues, researchers also found the majority of students experienced anxiety, depression, and stress (self-reported). It seems that financial insecurity, future uncertainty, lower self-esteem, social isolation (with peers and instructors) are putting the university students in an unpleasant situation, affecting their mental well-being. In this regard a 25-years-old graduate student shared:

"I am so depressed with this e-learning. I am learning nothing. How will I get a job in the future? I have no friends, even I don't know the teachers well. Everyone is making good results with less effort."

Another 27-year-old graduate student stated that:

"Right now, I'm going through a mental pressure. Studying online has been a source of stress for me since it appears artificial and humorless. Boring class lectures make me depressed day by day, and it seems to create a huge knowledge gap."

The above statements highlight the growing depression, anxiety, and stress among university students due to unplanned e-learning services, thus, negatively affecting students' learning experiences.

The goal of this research was to scrutinize the insights of students' experiences of e-learning practices during the COVID-19 pandemic by identifying the key affecting factors that negatively impact students' e-learning experiences. To this end, we used Interpretative Phenomenological Analysis (IPA) to gain deeper insights using a small sample size (N=25). Findings revealed 5 key themes and 18 sub-themes related to students' negative e-learning experiences (see Figure 1). This study found that the unplanned and sudden transition to e-learning severely (92% participants claimed) damages students' social relationships with peers and instructors (social isolation = 91.3%, peer conflict = 56.52%, low interaction = 96%, communication gap = 91.3%). These results are aligned with previous studies [17-18], [28-29] where the authors also claim that students suffered from a lack of social interaction, communication, and solidarity with peers as well as instructors. In addition, students miss their on-campus activities, such as attending lectures and sessions face to face, having fun with friends after class [21]. This study also found that a significant number of students (84%) were suffering from future uncertainty related to career (90.4%), learning gap (76.2%), future job market (66.7%), and lower CGPA (38.1%). These results are aligned with previous studies [21], [30], which found similar academic uncertain-ties. Furthermore, the study found that most students (88%) were suffering from financial difficulties due to declining family income (91%) and bearing tuition fees (82%), and additional educational expense (59.1%) e.g., mobile internet, digital devices, bandwidth and so on. As concerns online instruction, and evaluation, it is revealed that 64% of students were dissatisfied such as lower teaching-learning quality (56.3%), knowledge gap (81.3%), the authenticity of assessment (38%), and susceptibility to cheating (87.5%). Finally, this study also noticed an increasing (72%) psycho-logical disorders (anxiety=56.25%, stress=87.5%, depression=66%) among the students. Similar findings are also obtained in the following studies [31-32].

4　　Study limitation

This study has some potential limitations. Firstly, this study was conducted in one university in Bangladesh. Therefore, a further longitudinal study is required to enhance the understanding of tertiary level students' e-learning experiences including other universities. Secondly, the lack of prior research studies was another constraint to formulate research gaps. Thirdly, this study used a small sample size. However, we tried to overcome this limitation by adopting Interpretative Phenomenological Analysis (IPA).

5　　Conclusion and recommendations

The COVID-19 pandemic has disrupted schooling in more than 150 countries, affecting 1.6 billion students, leading to e-learning adaptations in almost every country [12]. However, due to the sudden shift, both teachers and students have faced numerous challenges to cope with this new normal situation. The present study explored the university students' experiences of e-learning practices during the COVID-19 crisis. Adopting the Interpretative Phenomenological Analysis (IPA), this study revealed that

a large percentage of Bangladeshi university students have been suffering from financial insecurity, future uncertainty, lower self-esteem, social isolation (with peers and instructors), psychological disorders (depression, anxiety, stress), etc. Consequently, most of the university students showed negative experiences with online teaching-learning strategies. Based on the findings, the following recommendations are stated to improve university students' e-learning experiences, especially the countries like Bangladesh:

1. To ensure students' continued involvement in e-learning, universities should conduct training activities and professional development workshops for both students and teachers to enhance their familiarity with online learning tools as well as improve the quality of online learning.
2. Students should be encouraged and motivated by providing psychological support from the universities as well as the government to reduce their mental illness without putting pressure on their future academic and working career.
3. To increase the student-teacher interaction in both synchronous and asynchronous modes, universities can follow the existing model such as [33], [37] and/or technology driven solutions such as augmented reality [38].
4. Educational institutions and policy makers need to develop proper online assessment and evaluation systems to promote quality education at the tertiary level.
5. Finally, government support e.g. policy formulation, strategic development, financial assistance, and IT infrastructural development etc. are needed for all levels of stakeholders to cope with this new normal situation.

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