Vol.4 No.2 (2021)

Journal of Applied Learning & Teaching

ISSN : **2591-801X**

Content Available at : **http://journals.sfu.ca/jalt/index.php/jalt/index**

A year of online classes amid COVID-19 pandemic at a Bangladeshi university: Economics students' experience and suggestions for improvements

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Keywords

Bangladesh;
COVID-19;
online education;
online learning;
pandemic;
students' perceptions.

JEL Code: I18, I21, I23, I28

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Article Info

Received 10 June 2021
Received in revised form 15 July 2021
Accepted 21 July 2021
Available online 23 July 2021

DOI: https://doi.org/10.37074/jalt.2021.4.2.3

Abstract

Current works perusing online learning amid the COVID-19 pandemic have several drawbacks, i.e., non-representative sample, closed-ended questions, and ignoring students' opinions about improvement. Also, most studies were carried out in the first weeks of online classes, and no study focused on university-level economics students. This paper uses a convenience sampling technique and open-ended questions and collects data from 154 university-level economics students who have participated in online learning for a year. According to the findings, advantages of online classes include that students can do classes from home avoiding health risks, easy accessibility, flexibility, cost-saving, reducing the likelihood of semester loss, and learning new technologies. Major disadvantages are network problems, difficulties in understanding the topic, unsuitability for mathematical courses, concentration problems, non-interactive classes, financial constraints, adverse health impacts, device and internet problems. Disadvantages outnumbered advantages. Students made several suggestions: using state-of-the-art digital tools, recording and uploading lectures, resolving internet and network issues, holding classes that comply with a fixed schedule, greater efforts to make the topics easier, reducing class duration, institutional support, and introducing an online assessment system. The study makes several policy suggestions and reveals that 70% of problems can be resolved by the Department, the University, and the University Grants Commission.

Introduction

Bangladesh reported the first COVID-19 case on March 8, 2020, and as of May 22, 2021, there were 786,698 confirmed cases and 12,310 deaths (WHO, 2021). The Ministry of Education instructed the shutdown of educational institutions and evacuations of students' residence halls on March 17, 2020, and they have not opened yet as of May 23, 2021. The total duration of school and university closure has now exceeded 60 weeks at a stretch of more than a year. In total, around 40 million learners have been affected. Of them, 7.88%, i.e., around 3 million students, are at the tertiary level, with 59.47% male and 40.53% female (UNESCO, 2021).

There are 49 public and 107 private universities in Bangladesh (UGC, 2021). Some private universities commenced online classes in April 2020 (The Business News, 2020). In May 2020, the University Grants Commission (UGC) instructed all universities to commence academic activities online (Dhaka Tribune, 2020). Although public universities were not allowed to take final examinations, the UGC allowed private universities to hold online examinations. As a result, public universities are conducting classes without any final assessments, and their students are still in the same semester they were more than a year ago.

Against this backdrop, the study aims to delineate a comprehensive picture of a Bangladeshi public university's economics students' online learning experience after a year of initiation of online classes. In doing so, the paper addresses the following research questions: (a) With a year of experience with online learning at the university level, what are the advantages that economics students are enjoying? (b) What are the unaddressed disadvantages that university-level economics students face after a year of online learning? (c) What measures do the students think would improve the experience of online learning?

Although existing works in the field highlight the advantages and disadvantages of online learning, they suffer from several limitations. This study contributes to the field in the following ways: (a) The literature review suggests that there has not been any study focusing on Economics students at the university level. However, since economics has both mathematical and non-mathematical courses, economics students' perceptions deserve separate treatment. (b) None of the studies report students' perceptions about improving the quality and effectiveness of online classes. Unlike other studies, in this paper, a whole subsection is devoted to students' views about the steps required to surmount the obstacles in online learning. (c) All the studies employed closed-ended questions, i.e., the researcher provided a set of questions. Each question had a set of answers from which students were asked to select the appropriate one, and sometimes the answers were given using Likert scales. Examples of such studies include Putri et al. (2020), Rasmitadila et al. (2020); Agung et al. (2020), Octoberlina and Muslimin (2020), Subedi et al. (2020), Rafi et al. (2020), Muthuprasad et al. (2021), Biswas et al. (2020), Ramij and Sultana (2020) and Al-Amin et al. (2021). Dutta and Smita (2020), though, used open-ended questions and collected information through a telephone interview. This paper uses open-ended questions to divulge students' perceptions, and respondents knew that their identity would not be revealed. More importantly, the information is about what the students think, not what the researcher thinks about what the students think. (d) Many of the existing studies have a small sample (for example, Putri et al., 2020; Rasmitadila et al. 2020; Agung et al., 2020; Octoberlina and Muslimin 2020; Dutta and Smita 2020). Here a sample of 154 students is used, making the sample more reliable and representative. (e) The existing studies were done immediately after introducing online classes. In contrast, this study is done after a year of online classes, enabling it to bring out meaningful insights and provide a comprehensive picture.

The remaining paper is organized as follows. Section 2 provides a brief review of the literature. Section 3 describes the materials and specifies the methods. Section 4 analyses and discusses the results. Finally, section 5 concludes the paper.

Literature review

The inception of distance education dates back to the early 1700s when clergymen were trained through correspondence (Adams and Olszewski-Kubilius, 2007). As gradually technological advancements such as radio, television, computer, internet, and today's electronic forums became available, distance education, especially, online learning became extremely popular (Olszewski-Kubilius and Corwith, 2011). However, Olszewski-Kubilius and Corwith (2010) warned about the effectiveness and success of distance education. Several studies have identified that online education, though convenient, inexpensive, technology-reliant, and useful, involves less social interaction, doubtful assessments, difficulties for instructors, and uneven technological costs (Kumar 2010). Following Fedynich (2013), online learning is easily accessible, easy to participate in, and it can be offered in a blended course. However, Fedynich (2013) identified inadequate computer literacy and poor internet facilities as obstacles. For successful online classes, the curriculum and the learning and teaching method should be modified. All stakeholders should understand the online learning styles and the environment (Lewis et al., 2015). To be flexible learners, students should be exposed to the heterogeneous learning experiences available (Zapalska and Brozik, 2006). Online students tend to possess a powerful visual and read-and-write learning style (Drago and Wagner 2004).

In the face of the COVID-19 pandemic, universities around the world have adopted online learning. However, they did not take up an identical approach. For example, Crawford et al. (2020) studied 20 countries, including 14 developing countries and 6 developed countries. In developing countries, some campuses are open, some universities are delivering education online, and some are closed with no option for online learning. However, in most developed nations, universities adopted online learning to avoid semester loss. The necessary technological infrastructure and the attitude of the teachers and students are absent in many developing countries. In a study of low-income countries, Jordan et al. (2021) cited mobile network problems and internet problems as significant impediments.

Many of the studies examining the challenges of online learning have focused on primary education. For instance, Putri et al. (2020) used a qualitative case study approach to diagnose the limitations of online learning in Indonesian primary schools. They reported three challenges that students face: students cannot communicate and socialize like in the pre-pandemic era, are required to look at the screen for a longer time, and students with special education needs faced a more significant challenge. Putri et al. (2020) used semi-structured interview questions to collect data. The sample consists of 15 teachers and parents of two primary schools who lived in the same area. Rasmitadila et al. (2020) collected data from 67 teachers in primary schools through surveys and semi-structured interviews and focused on teachers' perceptions of online learning. Following their analysis, factors like the flexibility of curriculum, technological preparedness, and facilitating roles of all stakeholders, i.e., institutions, teachers, guardians, community, and government, are crucial for Indonesia's online learning. Clark et al. (2020), using administrative data from three middle schools in China and employing the difference-in-difference approach, analyzed the causal effects of online learning on student performance. They found that students receiving online lessons from schools performed better than students in schools not offering online education. Students having access to online lectures of high-quality external teachers did better than students with access to online materials of internal teachers. Students using computers did better than smartphone users. Rural and urban students did not differ in terms of the benefits of distance learning. Also, online learning benefitted the low-achievers the most, and its impact on achievers was insignificant.

Using both open-ended and closed-ended questions, Agung et al. (2020) collected data on 66 Indonesian college students about their participation, accessibility, materials and assignment delivery, and suitability of the online platform used. They reported accessibility as the major problem affecting online learning. The study suggested using friendlier online platforms to increase students' participation. Octaberlina and Muslimin (2020) conducted a descriptive mixed-method survey. They gave 20 university students seven statements and asked them to give their opinion on a four-point Likert scale. They asked two questions to five students that had Yes/No as answers. The study identified unfamiliarity with e-learning, internet speed, and physical strain as the three obstacles. Students stressed the importance of training before attending the actual class. Also, they preferred breaks during the class and lower-sized files.

Muthuprasad et al. (2020) investigated Agricultural Student's opinions about online learning through a survey of 307 students. They found that most students preferred online classes during the closure, used smartphones, and preferred recorded classes with quizzes after each class. Flexibility and convenience were two essential benefits of online classes, while on the contrary, broadband connectivity was the main challenge in rural areas. Also, since agricultural education is practical-oriented, a complete shift to online learning is not pragmatic, and hence, a hybrid model is likely to do better. Rafi et al. (2020) listed barriers and perceptions about online classes reported by 364 undergraduate students after ten weeks of online learning. The survey revealed that students preferred recorded classes over live classes, and around ninety percent of students favored a shorter duration of classes. Finally, Subedi et al. (2020) surveyed teachers and students of 13 nursing colleges of Nepal involved in online classes. Even though most students were using data packs and mobile phones for online classes, most of them described electricity and the internet as key problems.

Biswas et al. (2020) attempted to gauge university students' perception of mobile learning. They surveyed 416 undergraduate and postgraduate students of Bangladeshi universities. Using a five-point Likert scale ranging from 'Strongly Disagree' to 'Strongly Agree,' the study found that students had a favorable view of mobile learning. Students think it will reduce the study gap during COVID-19. The study collected data just after introducing online classes and asked 15 questions about students' perceptions of mobile learning. Ramij and Sultana (2020) collected data on 409 students from 12 private universities and examined the readiness for online classes in Bangladesh. They used the five-point Likert scale to capture students' opinions on different socio-economic and infrastructural situations. The findings revealed that significant obstacles identified by the students are the absence of technological infrastructure, expensive internet and its low speed, pecuniary difficulties of the family, and mental pressure. Al-Amin et al. (2021) used the convenience sampling technique and summarized students' opinions about 14 questions where the answer was given in the Yes/No format. They collected data on 844 students from different universities in Bangladesh. Their findings revealed that most students did not have a separate reading room, and many students did not have an internet connection. Students' problems during online classes are inattentiveness, not being able to follow the class easily, power disruption, and unstable internet connections. Also, almost half of the students considered online classes ineffective. Dutta and Smita (2020) examined the impact of the pandemic on tertiary education in Bangladesh using a semi-structured survey of 50 students. The questions were open-ended, and the interview was conducted via telephone. The challenges mentioned include unavailability of devices, accessibility, speed and price of the internet, and problems related to online platforms used.

Methods

This paper uses 'online learning' and 'online classes' interchangeably and follows Rapanta et al. (2020) to define 'online learning' as the learning provided and received using the internet. As evident from the literature review, most of the existing works gathered information through surveys with closed-end questions. In such surveys, the researchers specified students' advantages and disadvantages, not the students themselves. Besides, in such surveys, students were required to select the answer from a given set of answers. Consequently, closed-end questions can be incapable of portraying the actual scenario of the phenomenon. For this study, the authors surveyed with open-ended questions. They had no information about a student's identity, which is crucial in a conservative setting like Bangladesh, where freedom of expression is not usually the norm.

The participants are 154 full-time students of the Department of Economics at a public university in Bangladesh. The University adopted online learning in May 2020, and in April 2021, a year was completed with online learning in place. The survey made no distinction between undergraduate and graduate students. The participants had no prior experience in online learning.

The data were collected from a student survey using the convenience sampling technique, conducted via Google Forms. This simple survey consisted of three multiple-choice questions (MCQ) and three open-ended questions. The MCQ questions asked: (a) if the students were staying with their families during the pandemic, (b) if they needed to go out to attend online classes, and (c) about the type of device they were using for online classes. The three open-ended questions were designed to identify the advantages and disadvantages of online classes and recommendations for more effective online classes. Specifically, the questions were: (a) What are the advantages of online classes? (b) What are the disadvantages of online classes? (c) What should be done to improve the quality of the online class and make it more effective?

No identifying information was collected, and students were aware that there was no way to trace respondents, encouraging them to provide factual responses. This particular feature brought out an exhaustive list of benefits, problems, and recommendations for online classes and made the study stand out among similar studies in the field.

The paper uses simple frequency distribution tables to summarize students' perceptions about online classes. Each table reports the frequency of a particular advantage/disadvantage/suggestion mentioned by students. Additionally, the last column of each table shows the percentage of students reporting a specific advantage/disadvantage/recommendation. Identical responses, collected via students' open-ended statements, were grouped. 154 students reported advantages 336 times, disadvantages 452 times, and made suggestions for improvements 331 times. Lastly, the tables were analyzed, and the results were described.

Analysis and discussions

The participants of the survey are 154 students of the Department of Economics at a Bangladeshi public university. The survey was administered in April 2021 using Google Forms. 91.56% of the respondents stated that they stayed with their families during the pandemic, while 8.44% stayed outside the family. 71.43% of the respondents could join online classes from home, whereas 28.57% of students needed to go out to join online classes. 92.21% of students used mobile phones for online classes, while 7.79% used desktop computers. On average, a respondent reported 2.18 advantages, 2.93 disadvantages and made 2.15 suggestions.

Although six students found online classes to have no advantages, 148 students reported one or multiple benefits associated with online classes. Table 1 presents the 15 most frequently reported advantages of online classes by the students. The most significant advantage of an online class for the students is that they can do it from home. 62 respondents, i.e., 40.26% of the students, mentioned it as an advantage. 23 of these respondents specifically emphasized the additional health benefits from social distancing by staying home during the COVID-19 pandemic.

Furthermore, 30.52% of students state that online class saves time, especially travel time. This benefit is followed by 17.53% of students reporting the flexibility that online classes give in terms of location, time, and situation. 16.23% of students say that they can remain connected with their studies because of online classes while the University is closed. 12.99% state cost savings as one of the advantages of the online class. Interestingly, saving travel costs was mentioned 12 times, whereas saving housing costs was brought up twice. 12.34% of the survey participants said that courses are getting completed even though the University is closed. Hence, without online classes, they would have faced session jams. 10.39% of respondents expressed that they can concentrate better in online classes. The reason cited is that the real classroom environment is noisy, but such disturbances can be minimized in a virtual classroom. A similar number of students found online classes advantageous as they can record and replay the class. 7.14% of students found the class schedule more convenient because of its flexibility. Many students (6.49% of respondents) found the virtual class easier to understand. Some of them attribute this to visual presentation, slides, and other tools in the online class. At the same time, two of them opined that this benefit is realized only for theoretical courses.

The following four advantages occurred in the survey with an identical frequency of 6 (3.89%). 1. Students can attend classes while doing something else. This flexibility has reduced student absenteeism. 2. When the University is open, many students must stay away from home in student dormitories or hostels. Now they can stay and spend time with their families. 3. Students are getting familiar with digital learning tools. 4. More materials can be covered quickly. As a result, courses are getting completed fast.

Table 1: Advantages of online classes

Advantage	Frequency	Percentage of overall frequency	Percentage of students
Doing classes from home	62	18.45%	40.26%
Saves time	47	13.99%	30.52%
Attending classes from anywhere/anytime	27	8.04%	17.53%
Students remaining connected with the study	25	7.44%	16.23%
Saves costs	20	5.95%	12.99%
Reducing the likelihood of session jam	19	5.65%	12.34%
Can concentrate better	16	4.76%	10.39%
Classes can be recorded and replayed	16	4.76%	10.39%
Convenient class schedule	11	3.27%	7.14%
Easy to understand	10	2.98%	6.49%
Less stressful	9	2.68%	5.84%
Can attend classes while doing something else	6	1.79%	3.89%
Can stay and spend time with family	6	1.79%	3.89%
Learning new technologies	6	1.79%	3.89%
Topics get completed fast	6	1.79%	3.89%
Others	56	16.67%	36.36%
Total	**336**	**100%**	

The longer duration of the class and the flexibility of attending classes during illness were cited as two benefits of virtual classes by 3.25% of the students. The following benefits were listed by 1.29% of the students: 1. More time

to study at home 2. A proper Q&A session 3. Online classes do not require interaction with others. Additionally, a good number of benefits of online classes were reported by a single respondent. The list includes submitting assignments instead of appearing in quizzes or class tests, not getting exposed to outside pollution, reducing the monotony during the pandemic, and courses can be completed with only a cell phone, to list a few.

As exhibited in Table 2, for university students, the mobile network problem is the biggest obstacle to a satisfactory experience in the online class. 59.09% of the participants cited this as an issue. The next major problem on the list is students facing difficulty grasping the material presented in class, which 36.36% of the participants indicated as an impediment. Some of the reasons mentioned are lack of hands-on experience, fast delivery of the lecture, not using boards, topics not explained sufficiently, and students not having books. Finally, as reported by 31.17% of students, the third major problem of an online class is that it is unsuitable for topics involving graphs and mathematics. Also, lab courses cannot be completed online.

Inability to concentrate was cited by 26.62% of students as a disadvantage. The family atmosphere is not conducive, some classes are longer than usual, and it is challenging to remain focused after a particular time (usually 30-40 minutes). The next hindrance is that online classes are not interactive and participatory like actual classes. Some of the views in this regard are that there is no face-to-face interaction, students cannot question as in the actual classroom, the environment is not lively, many do not or cannot participate, not as satisfactory as an actual class, etc.

Table 2: Problems of online classes

Problem	Frequency	Percentage of overall frequency	Percentage of students
Network problem	91	20.13%	59.09%
Difficult to understand	56	12.39%	36.36%
Okay for theoretical courses but not for mathematical courses	48	10.62%	31.17%
Cannot concentrate	41	9.07%	26.62%
Not interactive and participatory like a physical classroom	31	6.85%	20.13%
Financial constraint	26	5.75%	16.88%
Health issues	18	3.98%	11.69%
Device issues	17	3.76%	11.04%
Power outage	17	3.76%	11.04%
Unfamiliarity with digital technology	17	3.76%	11.04%
Students are not sincere	14	3.09%	9.09%
Internet problem	14	3.09%	9.09%
Erratic and unsuitable class schedule	11	2.43%	7.14%
Need to go out for class	8	1.77%	5.19%
Cannot benefit from peers	6	1.33%	3.89%
Classes not held regularly	6	1.33%	3.89%
Others	31	6.86%	20.13%
Total	**452**	**100%**	

Financial constraint was an obstruction for 16.88% of students. Though some specifically mentioned that their families were facing pecuniary difficulties, the majority found the internet expensive. In addition, many students, 11.69% of the participants, raised concerns about various health-related issues. For example, it is difficult to look at the screen for a more extended period, and it causes a headache, eye irritation, back pain, and neck pain. Besides, some get addicted to the device or the internet.

Many students (11.04% of the respondents) listed device issues, power outages, and unfamiliarity with digital technology as three obstacles they are facing. Students not having a proper device was recognized as an issue by the Government of Bangladesh at the beginning of the COVID-19 pandemic. Through the University Grants Commission (UGC), initiatives were undertaken to give students loans to purchase a device. 19 students of the Department of Economics initially applied for the loan, but later, when the preconditions of the loan were disclosed, only one student finally applied for it. Consequently, even after a year of the commencement of the online classes, the device-related problem remains. Electricity-related issues are something that cannot be resolved overnight. According to the survey, many instructors and students are not comfortable with the state-of-the-art digital tools for online classes. An online lecture should be different from an actual lecture since the setting is entirely different.

A good share of the students (9.09% of the respondents) informed that many of them were not sincere about the online class. Some get busy with other tasks during class, and many do not attend classes regularly. A similar number of students mention that the internet issue is causing a problem in the online class. 7.14% mentioned that the class schedule is not fixed, and sometimes classes are held at an inconvenient time. 5.19% of students said they need to go outside the home to join the class as the network is not available at home. Many classes are held in the evening. Some students need to go out at night for these classes, which raises security issues, especially for female students. 3.89% of students said they could not benefit from peers as they cannot discuss or do group study with their classmates. An equal percentage of students stated that classes are not held regularly, which happens without prior notice.

Additionally, there were nine disadvantages, each of which was reported by two respondents, and there were 13 disadvantages, each having a single respondent. As reported, some are not studying much now, and students have no scope for socializing. Some believe that online classes are inefficacious without assessments. A few expressed concern that the online class creates inequality between rural and urban students as infrastructure is better in the urban areas.

Notable suggestions made by students to improve the experience of the online class are reported in Table 3. The use of state-of-the-art digital tools tops the list of suggestions. It was proposed by 35.71% of the participating students. They suggested using tools like slides, whiteboard, digital pen, touchpad, tripod, screen sharing, Google classroom, messenger groups, and apps. Almost half of them said that better use of digital technology would help them understand topics entailing graphs and mathematics. The survey also reveals that student experience would be improved if teachers use the same apps.

The second most prominent suggestion on the list is recording the lectures and uploading them on some platform for students to access the lectures whenever they want. This suggestion is followed by resolving issues related to internet facilities. Most of these respondents espoused special internet packages for all students free of charge or

at a reduced price. The rest requested for ensuring a higher speed internet. The subsequent two suggestions in the Table are to hold classes regularly and undertaking greater efforts to make materials easy to understand, with each being mentioned by 19.48% of students. Students suggest that there should be a schedule to be followed strictly, i.e., taking at least two classes per week per course, which would help finish topics and hence, courses in time. Students also felt that there should be more significant efforts to make study materials easy to understand. This broad suggestion includes providing lecture notes and materials before class, explaining with examples, both teachers and students should come to the class prepared, slowing down the pace, giving time to copy, giving review classes, and reducing the syllabus.

Next came resolving the network-related issues that involve a considerable investment by both public and private sectors and cannot be solved quickly. 18.83% of students proposed this. 12.34% of students suggested reducing the duration of the class. According to the students, some classes are 3 hours long, which makes them difficult to concentrate. They suggested a class duration of 40-60 minutes. Also, some believe that topic-based classes will be better. A similar share of the students expects a more supporting role from the institution. The specific suggestions that fall into this category are: giving stipends to necessitous students, providing teachers and students with all the required equipment, arranging training for faculty members, counseling sessions for students, and creating an online institutional platform.

Table 3: Suggestions for improvement

Suggestion	Frequency	Percentage of overall frequency	Percentage of students
Using state-of-the-art digital tools in class	55	16.62%	35.71%
Recording classes and uploading online	35	10.57%	22.73%
Resolving internet issues	33	9.97%	21.43%
Holding classes regularly	30	9.06%	19.48%
Greater efforts to make materials easy to understand	30	9.06%	19.48%
Resolving network issues	29	8.76%	18.83%
Reducing class duration	19	5.74%	12.34%
Greater institutional support	19	5.74%	12.34%
Resolving device-related problems	18	5.44%	11.69%
Solving class schedule-related problems	12	3.62%	7.79%
Online assessment system	10	3.02%	6.49%
Making the class more participatory	10	3.02%	6.49%
Creating a student-friendly environment	8	2.42%	5.19%
Better discipline in the class	7	2.11%	4.54%
Addressing the issue of student inattentiveness	4	1.21%	2.59%
Others	14	4.23%	9.09%
Total	**331**	**100%**	

Solving device-related issues was recommended by 11.69% of students. In their opinion, all students, especially the poor ones, should be given a mobile phone at a reasonable price. Some suggested that the device should be given free of charge. Solving the problems related to class schedule, such as adhering to a fixed schedule and giving sufficient breaks between classes, were put forward by 7.79% of students. 6.49% stated the need for an online assessment system. Up to now, there has not been any assessment of student performance except assignments. Students suggested not only taking quizzes or class tests online but also taking final exams online. A similar number of students say that making the class more participatory would help make the online class better. Some students also requested Q&A sessions which would make the class more participatory. This proposal was followed by the suggestion of creating a student-friendly environment. Students opined that their problems should be acknowledged and addressed in the class, they should be allowed to enter the class if late by 10 minutes, and they should be notified at least 24 hours before an unscheduled class is held. 4.54% of students advocated for better discipline in the class. They suggested ensuring that students attend classes regularly, keeping and updating attendance records, and a strict late entry policy. Also, 2.59% of students suggested that teachers should address the issue of student inattentiveness. However, six students gave no suggestions. One of them gave no solution to the problems, and one expressed facing no problem in online classes.

Now, this paper's findings and some contemporary related works are juxtaposed to provide a comparative picture. Students' concern about session jam was also identified in Biswas et al. (2020). Muthuprasad et al. (2021) emphasized the flexibility and convenience of online classes as two prime advantages. Compared to these studies, this research has provided a much detailed account of the advantages of online classes (listed in Table 1). When the comparison is made based on the problems of online classes, the existing literature provides a much more comprehensive range of problems. Ramij and Sultana (2020) identified technological infrastructure as one of the bottlenecks. Network problems were mentioned in Jordan et al. (2021). Jordan et al. (2021), Octaberlina and Muslimin (2020), Muthuprasad et al. (2021), Ramij and Sultana (2020), Subedi et al. (2020), Al-Amin et al. (2021), Dutta and Smita (2020) – all cited internet problems as an impediment. The non-participatory nature of online classes was mentioned in Putri et al. (2020). Health concerns were raised in Putri et al. (2020), Octaberlina and Muslimin (2020), and Ramij and Sultana (2020). Unfamiliarity with digital tools was reported by Octaberlina and Muslimin (2020). The other problems of online classes during COVID-19 reported by current works include difficulties in understanding the class (Al-Amin et al., 2021), inability to concentrate (Al-Amin et al., 2021), financial constraints (Ramij and Sultana, 2020), device problems (Dutta and Smita, 2021) power outage (Subedi et al., 2020 and Al-Amin et al., 2021), and inattentiveness or lack of sincerity of students (Al-Amin et al., 2021).

Additionally, in contrast to Al-Amin et al. (2021), where almost half of the students considered online classes ineffective, students' perception survey of this paper did not reveal similar views. Again, problems of online classes, as presented in Table 2, suggest that this research encapsulates almost all the problems identified in other studies dealing with problems of online classes in the COVID-19 pandemic. Furthermore, it reveals a problem specific to economics students. Many economics courses are mathematical, involving graphs and equations. Almost one-third of the students opined that online classes are suitable for theoretical courses but not for mathematical courses. In the literature, no study surveyed students for their opinion to improve the effectiveness of online classes and reports the suggestions students made. As a result, a comparison cannot be conducted with other studies based on suggestions made by students. Nevertheless, the findings of this paper in this regard are broadly in line with Fedynich (2013) and

Lewis et al. (2015), who emphasized that online learning and teaching methods and the environment should be different.

By examining the problems of online classes and the suggestions for improvement, some useful policy recommendations can be made. The recommendations are divided into three categories. The first group of policies is to be implemented by the Department and the University. These include training teachers and students to make online classes more effective (efficient use of digital tools, improving the class environment, etc.), preparing a class schedule, adhering to it, and lowering class duration. These policies address problems faced by around 60% of the students and cover suggestions made by 70% of the students. The second category of policies is to be implemented by the University Grants Commission (UGC) and the University. They include allowing public universities to hold online exams, providing students with appropriate devices, and giving stipends to students facing financial constraints. These policies address 10% of the students' problems and cover suggestions made by around 11% of the students. The third group of recommendations, which include resolving mobile network and internet-related issues, must be implemented jointly by the government and private sector investors. They address problems of around 27% of the students and cover suggestions made by around 19% of the students.

A limitation of the study is that it did not interview the faculty members. Since, apart from the students, they are essential stakeholders, their perceptions might have contributed to a complete evaluation of online classes. In addition, the faculty members are likely facing some of the students' constraints. Thus, future research should explore both the students' and teachers' perspectives simultaneously. Additionally, such research could be extended to incorporate other stakeholders like the UGC, the government, and the private sector.

Conclusions

Online classes enable students to do classes from anywhere, especially from home. However, accessibility is marred by network problems. Although many students mentioned accessibility as an advantage, more students mentioned experiencing network or internet problems. However, a smaller number of students mentioned improving accessibility as a suggestion. This is probably because resolving countrywide network and internet problems are long-term issues and require huge investment. According to the students, flexibility is another advantage of online classes. Online classes can be recorded and played anytime. Therefore, the class schedule is convenient, and students can attend classes while doing something else. However, an erratic class schedule was found to reduce flexibility to a certain extent. Therefore, many suggested that faculty members should record lectures, upload them on some online platform, and solve class-schedule-related problems. These suggestions will improve flexibility.

Students felt that they have remained connected with the study because of online classes, reducing the likelihood of semester loss. Since online classes had started a year ago and the university, like other Bangladeshi public universities, has not conducted any exams, some students felt that the classes are not very effective without exams, and many advocated for introducing an online assessment system. Many students found the learning environment of online classes favorable. They were able to concentrate better, could grasp the materials quickly, and topics were getting completed faster. Notwithstanding, a more significant number of students expressed dissatisfaction about the learning environment in online classes. They found the class challenging to understand, especially when the topic was mathematical. The online class was not interactive and participatory like a real class, and students could not benefit from their classmates. Also, classes were not held regularly. There were a good number of suggestions specifically to improve the overall learning environment of an online class. These include more outstanding efforts of faculty members to make topics easily understandable, holding classes regularly, reducing the duration of lectures, creating a student-friendly environment, enforcing better discipline in the class, making the class more participatory, and addressing student attentiveness.

Online classes save costs of transportation, boarding, and food. Nevertheless, some students faced financial constraints during the pandemic and could not buy a suitable device, i.e., a cellular phone. In addition, some found the mobile data package expensive. Students sought greater institutional support to resolve these issues. Since students are attending classes from home, they are less exposed to the coronavirus and outside pollution. In addition, online classes are less stressful. They can spend more time with their families, which might positively impact their mental health status. In contrast, longer screen time has adverse health impacts. Reducing class duration can help in this regard.

Power outages, network errors, and internet problems are three obstacles students face while doing online classes. Unfortunately, solving these issues requires investments in both the public and private sectors, and these problems cannot be resolved readily. Students are getting acquainted with new digital tools owing to online classes. However, many cited unfamiliarity with digital tools as an obstacle. Following their suggestions, recording and uploading the lectures and using state-of-the-art digital tools will solve the problem.

The paper aimed to provide a detailed account of students' perceptions about the advantages and problems of online classes and their suggestions for improvements. Current works examining online learning amid the COVID-19 pandemic have several drawbacks, i.e., non-representative sample, closed-ended questions, and ignoring students' opinions about improvement. Also, most studies were carried out in the first weeks of online classes, and no study focused on university-level economics students. This paper uses a convenience sampling technique and open-ended questions and collects data from 154 university-level economics students who have participated in online learning for a year. Because of the methodology, compared to other studies, this research provided detailed descriptions of benefits, and problems of, and suggestions for, online classes. Also, it made several policy suggestions like training teachers and

students to make online classes more effective, strictly complying with a class schedule, reducing class duration, holding online exams, providing students with appropriate devices, and giving stipends to students facing financial constraints, resolving mobile network and internet-related issues. The study reveals that problems faced by 70% of students can be resolved by the Department, the University, and the UGC. Future research should broaden the scope by incorporating perceptions of other stakeholders, especially those of faculty members.

Funding: This research received no funding.

Institutional approval: Approved by the Department of Economics of the concerned Public University.

Participant's consent: Only the consenting students participated voluntarily.

Data availability: Available upon request.

Conflicts of interest: The authors declare no conflict of interest.

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