The Usage of Online Classrooms during the COVID-19 in Bangladesh: Some Issues and Influences

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Abstract

The purpose of this study is to find out how teachers and students felt about online classes in Bangladesh. During the COVID-19 pandemic, the education system in Bangladesh has made a change by delivering classes via online means. Therefore, this study examines teachers' and students' perspectives and concerns about taking online classes, which have become mandatory because of the COVID-19 pandemic. The data were collected by using an online survey method. The sample included 907 teachers and 1451 students from schools, colleges, and universities across Bangladesh's eight divisions. The data show that in the pandemic situation, a total of 80% of students were able to be connected with online education. Among them, 56% of students got no facilities regarding online classes from their educational institutions. To continue their study, 56% of the students wanted offline education. Likewise,

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it was tracked down that quality and convenient cooperation among students and instructors, specialized help accessibility, organized online class modules, and changes permitting the lead of reasonable exercises are largely fundamental elements in educators' and students' fulfilment with online classes. The absence of typical classroom socializing, lack of face-to-face engagement with the teacher, and response time were among the major difficulties raised by the students. This study contributes significantly to the studies of the impact of COVID-19 on education particularly within developing countries. It also will have a significant impact on the government of Bangladesh's decision on how to continue online classes in the face of the epidemic and reopen Bangladesh's educational facilities.

Key Words

Online classes, COVID-19 pandemic, technical support, classroom socializing

Introduction

An epic COVID-19, known as Coronavirus, was found in a fish market in Wuhan in 2029 (Huang et al. 2020). Consequences of the infection clinical investigation showed individual-to-individual transmission (Li et al. 2020; Paules et al. 2020; Wang, Cheng, et al. 2020). COVID-19 was made by the World Health Organization (WHO) as an all-encompassing community health crisis of worldwide concern ahead of 30 January 2020 and a pandemic ahead of 11 March 2020 (Cucinotta & Vanelli 2020). The pandemic was referred to by Merriam-Webster Online Dictionary (2020) as "an epidemic of a disease that occurs over a large geographic area and affects an unusually high proportion of the population". This pandemic has constrained the overall actual conclusion of partnerships, games, and schools by driving all organizations to move to online channels (Adedoyin & Soykan 2020). Numerous organizations have been engaged in how best to bring to the table online course materials including assessments. Thus, despite being a danger to mankind, the Coronavirus has set up organizations to put resources into internet learning (Muktar et al. 2020).

Internet learning and classes are progressively turning into a piece of the worldwide schooling framework (Nambiar 2020). Web-based learning frameworks depend on web programming that is utilized to convey, screen, and oversee courses over the Web (Keis et al. 2017). Hrastinski (2008) expressed that while the two methods of web-based

learning, in particular nonconcurrent and simultaneous internet learning, are broadly differentiated, instructors, associations, and establishments should have an intensive comprehension of the advantages and limits altogether of web-based figuring out how to be effective and useful. It incorporates the acquaintance of specialized developments with a direct, plan and conveys the substance of learning and advances two-way contact between understudies and the workforce (Thanji and Vasantha 2016). In Bangladesh, establishments typically use Microsoft Groups, Zoom and Google Meet as learning board frameworks, alongside their video conferencing applications. Others usually utilized video conferencing arrangements incorporating Edmodo, Moodle, Skype for business, WebEx, Adobe Associates, etc (Barbera and Clarà 2012).

A few scientists have performed studies on the comprehension of web-based learning by understudies. Popovici and Mironov (2014) tracked down that, through their impact on the learning cycle, it turns out to be obvious that understudies were significantly mindful of the progressions achieved by advanced innovations. Male understudies, understudies with earlier PC experience, and understudies with idealistic perspectives toward arising innovation were all less ideal for e-learning nearby than different understudies (Keller and Cernerud 2002). Likewise, Eldeeb (2014) investigated that understudies picked blended mode and web-enhanced courses instead of web-subordinate courses or fully online courses. Concerning the advantages of e-learning, understudies saw the online e-learning module as useful in working on their arrangement, autonomy, self-restraint, learning inspiration, and communication with one another and the instructor (Mislinawati and Nurmasyitah 2018). Likewise, Mamattah (2016) showed that most understudies concurred that e-learning is a progressive idea and should be upheld, yet a couple of issues were perceived, for example, the dread of segregation by businesses against the individuals who concentrate on e-learning.

Since the viability of the e-learning framework depends on the capacity and knowledge of understudies to utilize this framework (Almaiah and Jalil 2014; Almaiah and Alismaiel 2019; Shawai and Almaiah 2018), the absence of utilization of the e-learning framework hampers the acknowledgement of advantages (Almaiah et al. 2019a; Almaiah et al. 2019b; Almaiah and Al-Khasawneh 2020). Accordingly, this prompts a fruitless technique and is a misuse of cash for certain colleges (Naveed et al. 2017). Study regarding this matter is as yet in its earliest stages, where students' points of view are not altogether contemplated (Tarhini et al. 2017; Almaiah and Alamri 2018). The execution of e-learning will lead colleges to all the more

likely comprehend the requirements of their understudies and at last lead to a viable e-learning framework (El-Masri and Tarhini 2017; Alksasbeh et al. 2019). Apparently, during the Coronavirus pandemic, there was no nitty gritty survey of the issues and factors influencing the utilization of the e-learning framework; in any case, around 3 years prior, e-learning frameworks were executed in numerous colleges.

Due to this, this article aims to contribute to the above literature by investigating the key issues and factors affecting the utilization of the e-learning framework during the Coronavirus pandemic. To do this, this study conducted an online survey to collect primary data using a questionnaire prepared based on online classes during the pandemic. The secondary data were collected from various journals, websites, and bulletins. The questionnaire was divided into two sectors: a) students and b) teachers. In the survey, a total of 2248 participants (1372 students and 876 teachers) from 64 districts of school, college and university were surveyed using a systemic questionnaire prepared based on socio-economic, demographic, livelihood characteristics, online dependence, and student activity during the online assessment. Informative questions were asked to ensure all possible implementation of better online assessments for students and teachers.

Then, the collected data were analyzed by using software such as SPSS, R, MS Excel and ArcGIS V10.6 for mapping. Finally, considering all the data and suggestions from students and teachers, the research concluded with some effective recommendations about the upgradation of the online educational assessment for students and teachers all over Bangladesh.

Demographic and Economic Backgrounds of the Students

Location and Age of the Students

This survey was conducted online due to the COVID-19 situation. Therefore, the participants were from different divisions in Bangladesh. The participants were mostly students and so their age level varied from 0 to 30+. Their demographic information can be seen in Table 1.

Table 1
Demographic Information of the Students

Divisions	Population (in %)	Town (in %)	Village (in %)	Age Level of the Students (in years) 0-10 (in %)	11- 20 (in %)	21–30 (in %)	30+ (in %)
Barishal	20	64	36	1	18	75	6
Chittagong	14	65	35	1	16	70	13
Dhaka	30	56	44	1	16	73	10
Khulna	9	65	35	1	16	77	6
Mymensingh	5	67	33	0	14	78	8
Rajshahi	8	69	31	2	13	81	4
Rangpur	7	29	71	0	14	79	7
Sylhet	7	32	68	1	27	62	10

Table 1 demonstrates the demographic information of the students who participated in the survey. From the total participants, it can be seen that from the Dhaka division, 30% of the population had participated, among them 56% were from the town and 44% were from the village. Moreover, 73% of the students aged 21-30 and only 1% of the students aged 0-10 from the Dhaka division participated in this survey. On the other hand, from the Mymensingh division, only 5% of the population participated in the survey of which 67% of them were from the town and 33% were from the village. Moreover, 14% of the students aged 11-20 and only 8% of the students aged 30+ participated in this survey. From Table 1, it can be seen that most of the students were from town because due to internet network issues. Most of the participants' age levels were from 21 to 30 because in this survey the participants were mostly university students.

Education and Monthly Family Income

In Bangladesh, there are different levels of education. Students must finish their education levels to go to the next steps. Many students stop their education due to their family income problems. In this survey, the participants were from different levels of education and their family income varies from 0 to 50000+ BDT. Their educational status and monthly family income data were tabulated in Table 2.

Table 2
Educational Status of the Students and Their Monthly Family Income

Monthly family income (in BDT)							
Education Level	**% of Population**	**0-5000 (in %)**	**5001-10000 (in %)**	**10001-15000 (in %)**	**15001-25000 (in %)**	**25001-50000 (in %)**	**50000+ (in %)**
Primary	3	5	15	51	27	0	2
Secondary	10	28	29	26	13	1	3
College	11	17	32	24	16	6	5
O Level	2	0	6	19	21	19	35
A Level	6	0	0	0	83	5	12
University	64	13	11	47	21	7	1
Madrasa	4	3	3	9	55	30	0

Table 2 demonstrates the educational status of the students and their monthly family income. It can be seen that from primary level education, only 3% of students participated in this survey and 15% of the population had 5001-10000 BDT as their monthly family income. It also indicates that 51% of the population had 10001-15000 BDT and only 2% of the population had over 50000+ BDT as their monthly family income. Participation from the primary level was less than 5%. It is because in Bangladesh primary level students are not allowed to use online platforms. From Table 2, it can also be seen that only 2% of students participated in this survey from O-level. Among them, 6% had 5001-10000 BDT and 21% had 15001-25000 BDT as their monthly family income respectively. Moreover, 35% had over 50000+ BDT as their monthly family income. It is because most rich people send their children to take O-level education in Bangladesh. Table 2 shows 64% of the population was from the university level, from which 13% had 0-5000 BDT and the other 47% had 10001-15000 BDT as their monthly family income respectively. Only 7% had 25001-50000 BDT as their monthly family income. The participation from the university level was greater than 50% because most university-level students were going through online classes to eradicate the session jam.

Internet Service-Oriented Information of the Students

Device Usage and Internet Connectivity

Students used different types of devices to attend online classes and their internet connectivity was not the same as they attended online classes from different locations in Bangladesh. All the data related to the devices and internet connectivity that were used by students during online classes were tabulated in Table 3.

Table 3

Students' Use of Devices during Online Classes and Internet Network Connectivity

		Internet Connectivity					
Device	**% of Population**	**Wi-Fi (in %)**	**Mobile Data (in %)**	**Strong (in %)**	**Medium (in %)**	**Weak (in %)**	**No Internet (in %)**
Mobile	47	42	58	28	52	10	10
PC/ Laptop	25	54	46	47	38	11	4
Tab	6	100	0	62	38	0	0
Television	2	0	0	0	0	0	0
No Device	20	0	0	0	0	0	0

Table 3 demonstrates the devices that were used during online class and the internet network connectivity of the students who participated in the survey. It can be seen that 47% of the population used mobile to attend online classes. Among them, 42% used Wi-Fi and the other 58% used mobile data. Around 28% had strong internet connectivity and the other 52% had medium internet connectivity, and 10% had no internet connectivity. As for PC/laptops, 25% of the population used them for attending online classes. Among them, 54% used Wi-Fi and the other 46% used mobile data. Around 47% had strong internet connectivity and the other 11% had weak internet connectivity. Other devices such as television were also used to attend online classes but the use rate was less than 5%. Using mobile devices for attending online classes was greater in Bangladesh because most people have at least one mobile device due to the cheap price given by the mobile company. Though the cheap price of mobile devices in Bangladesh, there were 20% of the population could not afford to buy them. That is why they could not able to join online classes to continue their education.

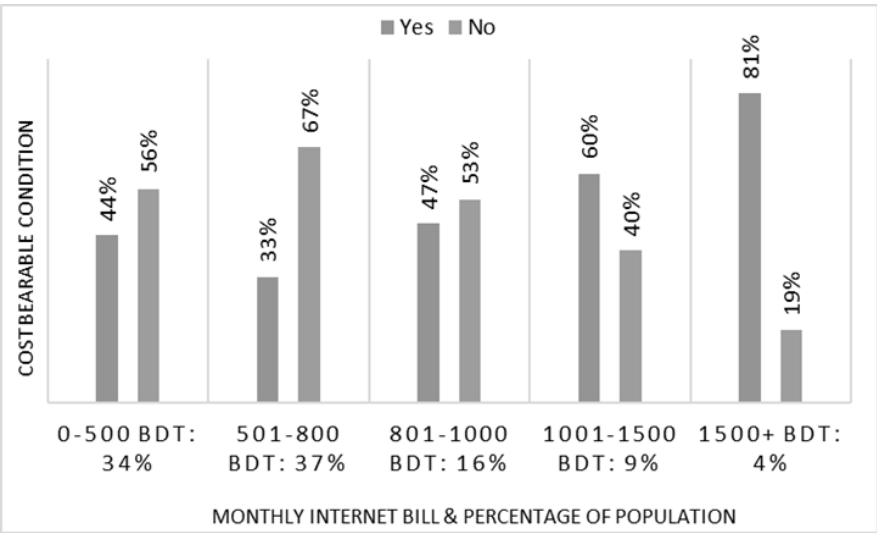
Monthly Internet Bill and Cost-Bearable Status

Figure 1 shows the monthly internet bill and cost-bearable status of the students who participated in the survey. The monthly internet bill and percentage of the population are on the X-axis and the cost-bearable condition is on the Y-axis.

It can be seen that 37% of the population paid 501-800 BDT for monthly internet bills and among them, 33% of the population believed that it was bearable and other 67% of the population believed it was unbearable for them. The reason for the cost unbearable of 67% was that most of the students were from middle-class families. As their family income was limited, they could not bear the cost of the monthly internet bill. Only 4% of the population paid over 1500 BDT for a monthly internet bill and among them, 81% of the population thought that it was bearable and another 19% of the population thought it was unbearable for them. Here the reason for the cost bearable of 81% was that these students were from rich families which is why their families could bear the cost of the monthly internet bill.

Figure 1

Monthly Bills and Cost-Bearable Status



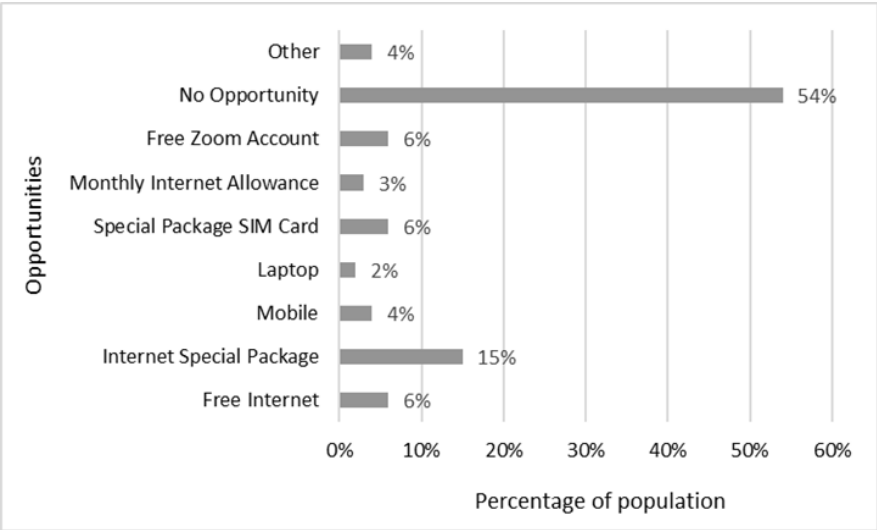
Opportunities from Institutions

Figure 2 shows opportunities which were provided to the students from their institutions. Here, the percentage of the population is stated on the X-axis and opportunities are on the Y-axis.

From the figure, it can be seen that 6% of the population got free internet, a special package SIM card, and a free Zoom account from their institutions. Around 54% of the population could not get any opportunities from their institutions. It was regrettable that institutions were unable to assist their students in continuing their online studies. That is why many of our students could not get any opportunities to move forward.

Figure 2

Opportunities Provided by Students' Educational Institutions



Online Class-Oriented Information of the Students

Duration of Online Classes and Class Location

Due to the COVID-19 situation, most of the institutions have arranged online classes for their students. The class duration (In Hours) varied for each institution and therefore students were facing problems in attending online classes. Due to some issues, students attended online classes inside as well as outside of their houses.

Table 4 demonstrates the online class duration and class location of the students who participated in the survey. It can be seen that only 7% of the population attended classes for 0-1 hour of the day. Around 26% of students attended classes inside of their houses and 74% of students attended classes outside of their houses. The reason for attending classes outside of the house could be a weak internet connection. On the other hand, 28% of the population attended classes for 2-3 hours of the day. Among them, 87% attended classes inside of their house and the other 13% of students attended classes outside of their houses. It can be said that students who had a strong internet connection inside their houses did not need to go outside to attend online classes.

Table 4
Online Class Duration and Class Location

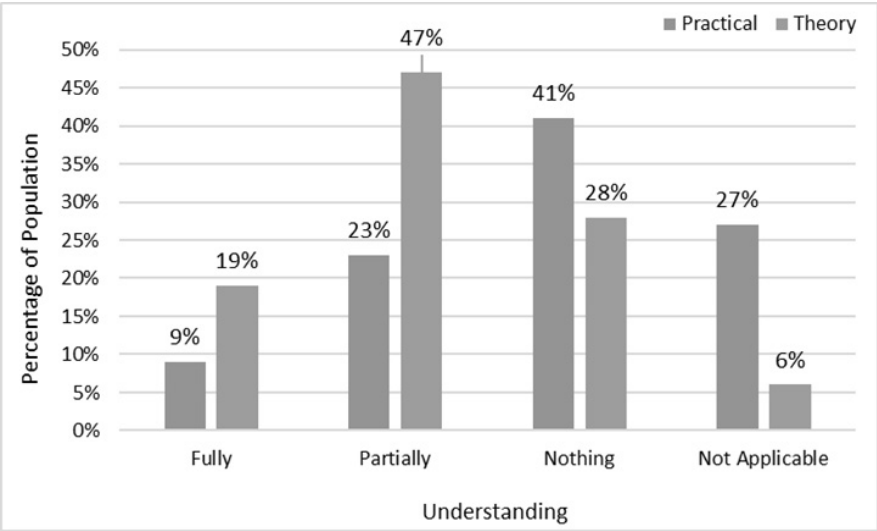
	Class Location		
Duration (In Hours)	**Population (in %)**	**Inside (in %)**	**Outside (in %)**
0--1	7	26	74
1--2	12	24	76
2--3	28	87	13
3--5	25	89	11
5+	8	76	24

Understandability (Practical and Theory Classes)

Figure 3 shows the understandability of the students for online theory and practical classes. Understanding ability is on the X-axis and the percentage of the population is on the Y-axis. Here it can be seen that 9% of the population fully understood practical classes and the other 19% of the population understood theory classes. In addition, 41% of the population did not understand practical classes and the same goes for the other 28% of the population. The percentage of understanding nothing in theory and practical classes were very high. Network issues, load shedding or less concentration in online classes were the reasons for this. From Figure 3, it also can be seen that practical and theory classes were not applicable for 27% and 6% of the population respectively.

Figure 3

Understandability of the Students for Online Theory and Practical Classes

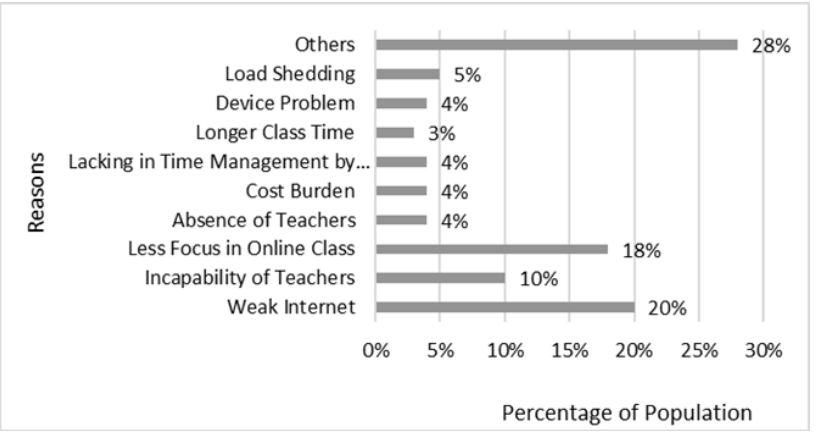


Students' Perspective of the Low Value of Online Classes

Figure 4 shows the reasons for the low value of online classes (students' perspective). The percentage of the population is on the X-axis and the reasons are on the Y-axis. Here it can be seen that 20% of the population thought that the reason for the low value of online classes was weak or unstable internet connection in Bangladesh. It also indicates that 18% and 10% of the population thought that the reasons could be less focused due to staying in the family and incapability of teachers because they were not used to taking these online classes previously respectively. Moreover, 3% of the population thought that longer class time was the reason for the low value of online classes because it became monotonous for the students to keep studying for hours and hours. 28% of the population thought there were some other issues which could make them more comfortable in classrooms.

Figure 4

Reasons for Low Value of Online Classes (Students' Perspective)



Positive and Negative Sides of Online Classes

Online classes had both positive and negative wings. The positive and negative sides of online class data from the students' perspective were collected and tabulated in Table 5.

Table 5

Positive and Negative Sides of Online Classes (Students' Perspective)

Positivity		**Negativity**	
Positive Side	**Population (in %)**	**Negative Side**	**Population (in %)**
Zoom, Classroom, Google meet Knowing	21	Eye Sight Problem	15
Efficient in Software	4	Mental Health Problem	7
Technological Advancement	7	Incapability of Understanding	8
No Session Jam	9	High Temper	5
Exam Schedule Maintain	2	Spending More Time in Social Media	7
No Positivity	20	Hearing Problem	3
Others	37	Headache and Insomnia	5
		No Negativity	5
		Others	45

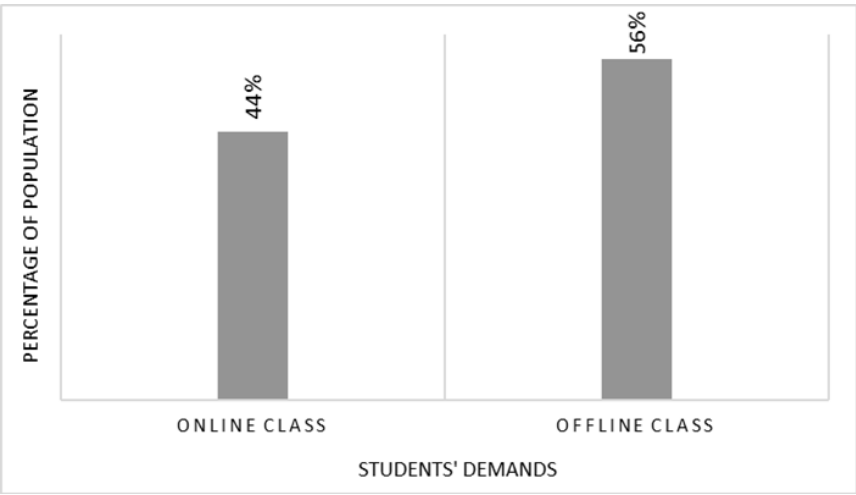
Table 5 demonstrates the positive and negative sides of online classes from the student's perspective. It can be seen that, in the positivity section, 21% of the population said that during online classes, they got the opportunity to know about different online platforms such as Zoom, Classroom, and Google Meet. Only 4% of the population believed that they were being efficient in software during online classes. Moreover, 9% of the population believed that there would not be a session jam because classes and exams were taken on online by the institutions. 20% of the respondents thought that there was no positivity in online classes.

From Table 5, it can be seen that in the negativity section, 15% of the population believed they had eyesight problems due to constantly looking at the device screen and 7% said that due to online classes, they spent more time in online platforms which created mental health problem, hearing problem because of using headphone on the ear all the time during online classes, headache and insomnia problem with the rate was 7%, 3% and 5%, respectively. On the other hand, 5% of respondents believed that there was no negativity in online classes.

The Students' Demands

Figure 5 shows the demand of the students. The students' demand is on the X-axis and the percentage of the population is on the Y-axis. It can be seen that, due to COVID-19, 44% of the population still wanted an online class so that they could be safe at home. Nevertheless, 56% of the population wanted to go for an offline class because of the low value of an online class where they were facing difficulties to continue the online class.

Figure 5
The Students' Demands



Demographic and Economic Information of the Teachers

Location and Age of the Teachers

Table 6 shows the demographic information of the teachers where some specific criteria such as divisions, percentage of the population, town, village and age differences were presented. All these data were collected through an online survey and tabulated in Table 6.

From Table 6, it can be seen that among the 8 divisions, the highest percentage of the population (28%) belonged to the Dhaka division. As Dhaka was the capital of Bangladesh, the percentage was genuinely high in the Dhaka division. Among them, 55% of teachers were from towns and 45% were from villages. Table 6 also shows that 18% of the population was from 21-30 years and the other 53% were from 31-40 years. Young teachers tried to do something good in a short time and they tried to stay in Dhaka and that is why the percentage of middle-aged teachers rate was so high (53%). The second highest percentage was 16% which belonged to the Chittagong division. Among them, 51% were from towns and 49% from villages. Moreover, 21% were from 21-30 years and 13% were from 40+ years. The reason could be that, after the Dhaka division, Chittagong was considered the third highest rank in the educational sector. On the other hand, 6% of the population was from the Rangpur division. Among them, 64% were from towns and 36% were from villages. Of them, 19% were from 21-30 years and 56% were from 31-40 years.

Table 6
Demographic Information of the Teachers

Divisions	% of Population	Age level of the teachers (in years) Town (in %)	Village (in %)	21 – 30 (in %)	31 – 40 (in %)	40+ (in %)
Barishal	8	59	31	28	49	23
Chittagong	16	51	49	21	66%	13
Dhaka	28	55	45	18	53	29
Khulna	11	61	39	36	46	18
Mymensingh	8	68	32	34	47	19
Rajshahi	12	64	36	18	59	23
Rangpur	6	64	36	19	56	25
Sylhet	11	68	32	15	48	37

Professional Institutions and Monthly Income

Table 7 indicates the second most important point of demographic and economic information, which was the professional institutions of the teachers and monthly income. The table deals with the level of education and their monthly income in various scales such as 1-5,000 BDT, 5,001-10,000 BDT, 10,001-15,000 BDT, 15,001-25,000 BDT, 25000+ BDT and no income.

Table 7
Professional Institutions of the Teachers and Monthly Income

Education Level	% of Population	Monthly income (in BDT) 1-5000 (in %)	5001-10000 (in %)	10001-15000 (in %)	15001-25000 (in %)	25000+ (in %)	No Income (in %)
School	40	5	11	10	7	47	20
College	21	0	4	8	29	45	14
University	27	0	0	0	12	69	19
Madrasa	12	10	21	29	3	0	37

From Table 7, it can be seen that around 40% of the teachers came from schools. Among them, 11% had monthly income in the range of 5001-10000 BDT and 47% of teachers' monthly income was over 25000 BDT. Moreover, 20% of the population had no income due to the COVID-19

situation. Table 7 also shows that 27% of the population came from universities. Among them, 69% had monthly income over 25000 BDT and only 12% had monthly income in the range of 15001-25000 BDT. The reason for having a monthly income of over 25000 BDT could be, at the university level, monthly income starts from 25,000+ BDT in Bangladesh. Moreover, the reason for no income could be, due to COVID-19, that some private universities faced a financial crisis so they could not provide the salary of the teachers.

Internet Service-Oriented Information of the Teachers

Device Usage, Medium and Internet Connectivity

Table 8 discusses the device usage during online classes and the internet connectivity of the teachers. Internet medium is divided into two categories: Wi-Fi and mobile data. The internet connectivity is recorded in percentage for strong, medium, weak and no internet connection. All the data were tabulated in Table 8.

Table 8

Teachers' Usage of Devices during Online Classes and Internet Connectivity

		Internet Connectivity					
Device	**% of Population**	**WiFi (in %)**	**Mobile Data (in %)**	**Strong (in %)**	**Medium (in %)**	**Weak (in %)**	**No Internet (in %)**
Mobile	34	65	35	30	28	25	17
PC/ Laptop	50	63	37	25	53	15	7
Tab	6	100	0	76	24	0	0
Television	3	0	0	0	0	0	0
No Device	7	0	0	0	0	0	0

From Table 8, it can be seen that mobile, PC/laptops, tab and television were used to take online classes during the COVID-19 pandemic. Among them, most of the teachers used PC/laptops and the percentage was 50 %. Among them, 63% used Wi-Fi and the other 37% used mobile data. Moreover, 53% of the respondents had internet connectivity and only 7% had no internet connection. In addition, 3% of the population used television

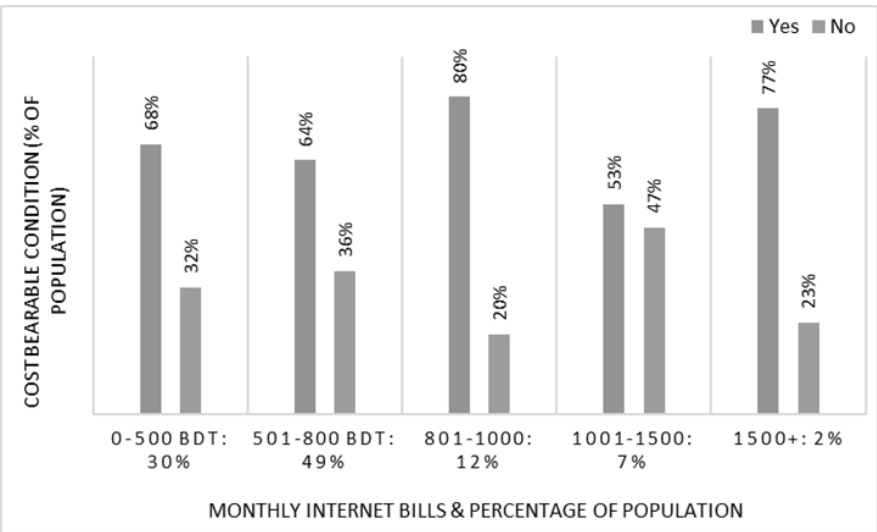
to take online classes and 7% had no device to take online classes. The reason could be their monthly income which was below average to buy a smartphone.

Monthly Internet Bills and Cost-Bearable Status

Figure 6 shows the monthly internet bill and cost-bearable status of the teachers who participated in this survey. The X-axis represents the monthly internet bill and percentage of the population and Y-axis shows the cost-bearable condition. It was found that 30% paid 0-500 BDT and among them, 68% of the teachers believed that it was bearable and the rest 32% thought it was not bearable for them. Moreover, 12% paid 801-1000 BDT and among them, 80% of teachers considered the internet bill bearable, but 20% of teachers could not bear the cost of the internet. In addition, the amount of 1,500+ BDT was paid as a monthly internet bill by only 2% of the population, where 77% of teachers thought it was bearable and 23% of teachers thought they could not bear it. Among all these, most of the teachers used 501-800 BDT as monthly internet bills. The reason could be said that it was easy for small families to bear small amounts of monthly internet bills as there were other expenses.

Figure 6

Monthly Bills and Cost-Bearable Status

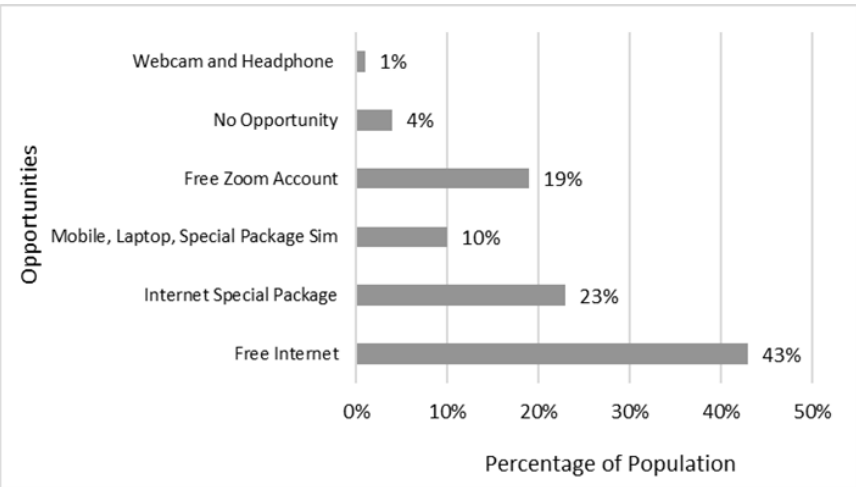


Opportunities from Institutions

Figure 7 shows the opportunities that were given to the teachers from their professional institutions. Different educational institutions provided different kinds of opportunities. Some provided devices with a free zoom account with a webcam and headphones and others provided special packages with free internet. In this figure, the X-axis shows the percentage of the population and the Y-axis shows the opportunities given to the teachers. It was found that the maximum institution provided free internet and the percentage was 43%. 23% of the population got special internet packages from their institutions. On the other hand, only 1% got a webcam and headphones because providing a webcam and headphones to every teacher could be very costly for the institutions. Despite this, there were 4% of teachers got no opportunity from their educational institutions and the reason could be that their institutions were not capable to give opportunities to their teachers.

Figure 7

Teachers' Opportunities from Their Professional Institutions



Online Class-Oriented Information of the Teachers

Duration and Location of Online Classes

Table 9 demonstrates online class-oriented information in which online class duration and class location of the teachers are presented.

Table 9
Online Class Duration and Location

Class Location			
Duration (In Hour)	**Population (in %)**	**Inside (in %)**	**Outside (in %)**
0--1	16	70	30
1--2	25	74	26
2--3	35	79	21
3--5	10	73	27
5+	4	78	22

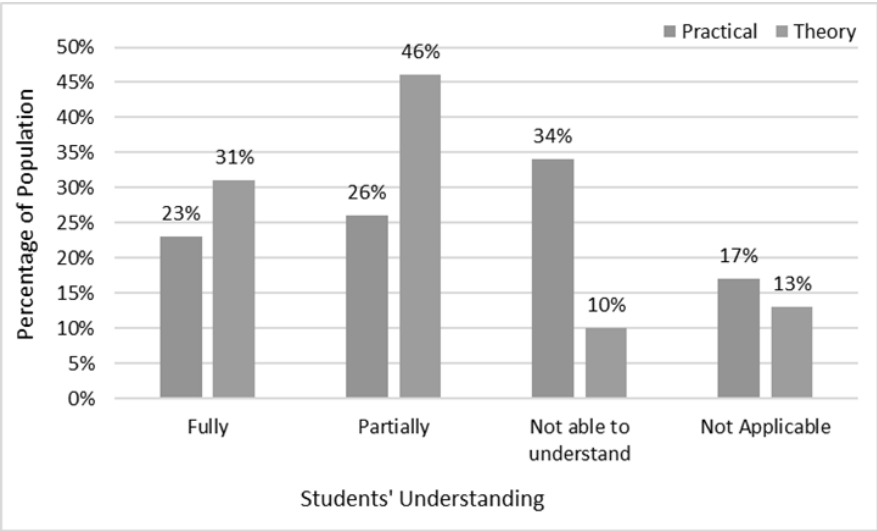
From Table 9, it can be seen that 16% of the teachers gave online classes with a duration of 0-1 hour. Among them, 70% of the teachers gave classes inside their houses and the other 30% gave classes outside of their houses as they faced network problems while giving classes. Moreover, 35% of the teachers gave online classes, which lasted 2-3 hours. Among them, 79% of the teachers gave classes inside their houses and the other 21% gave classes outside of their houses.

Understandability (Practical & Theory Classes)

Figure 8 shows the understanding ability of the students for online theory and practical classes according to teachers. The X-axis represents the understanding ability of the students and the Y-axis represents the percentage of the population. Here, 23% of teachers believed they were able to fully understand the practical classes to the students and 31% thought they were able to fully understand the theory class. On the other hand, 26% of teachers thought they were able to understand the practical classes and 46% thought they were able to understand the theory classes partially. Moreover, for 17% and 13% of the population, practical and theory classes were not applicable respectively. The reason for not being able to understand the practical class was that teachers took it online. They were not able to go to the lab in their institutions as they stayed home during the COVID-19 pandemic. That is why students were not able to see the equipment in the lab and they were not able to understand the practical class.

Figure 8

Students' Understandability of Online Theory and Practical Classes



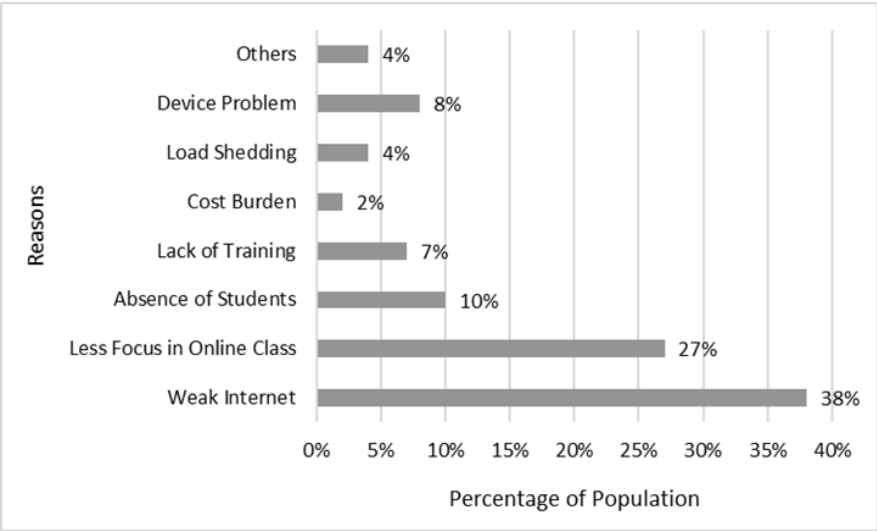
Teachers' Perspective of Low Value of Online Classes

Figure 9 shows the teacher's perspective of the low value of the online classes. The X-axis represents the percentage of the population and Y-axis represents the reasons. It can be seen these reasons could be device problems, load shedding, cost burden, lack of training, absence of students, students' low focus on online classes, and weak internet connection.

From Figure 9, it can be seen that 38% of the population thought that a weak internet connection was an issue behind the low value of online classes. Because of the weak internet connection, it was not possible to take online classes for teachers and students could concentrate on online classes. 27% of the teachers thought that students did not focus during online classes, which caused the low value of online classes. Another reason for the low value of online classes was the absence rate of students, which was 10%. Moreover, online classes were not easy to take without any training as most of the teachers had less knowledge of technology. That is why 7% of teachers thought that their lack of training was a reason for the low values of online classes. Moreover, 8%, 2% and 4% thought that device problems, cost burden and load shedding were also the reasons for the low value of online classes respectively.

Figure 9

Reasons for the Low Value of Online Class (Teachers' Perspective)



Positive and Negative Sides

Online classes had both positive and negative sides. Because of COVID-19, online classes were asked to be taken for the safety of the teachers, students and most of the people who were involved in the educational sector. These positive and negative sides are presented in Table 10.

Table 10

Positive and Negative Sides of Online Classes (Teachers' Perspective)

Positivity		**Negativity**	
Positive Side	**Population (in %)**	**Negative Side**	**Population (in %)**
Zoom, Classroom, Google meet Knowing	19	Eye Sight Problem	22
Efficient in Software	15	Mental Health Problem	27
Technological Advancement	11	Hearing Problem with High Temper	8

Education Environment in Home	18	Headache & Insomnia	7
No Session Jam	20	Mentally Upset (Didn't receive full salary)	9
Exam Schedule Maintain	8	Mental Problem with Rough Behave	9
No Positivity	6	No Negativity	10
Others	3	Others	8

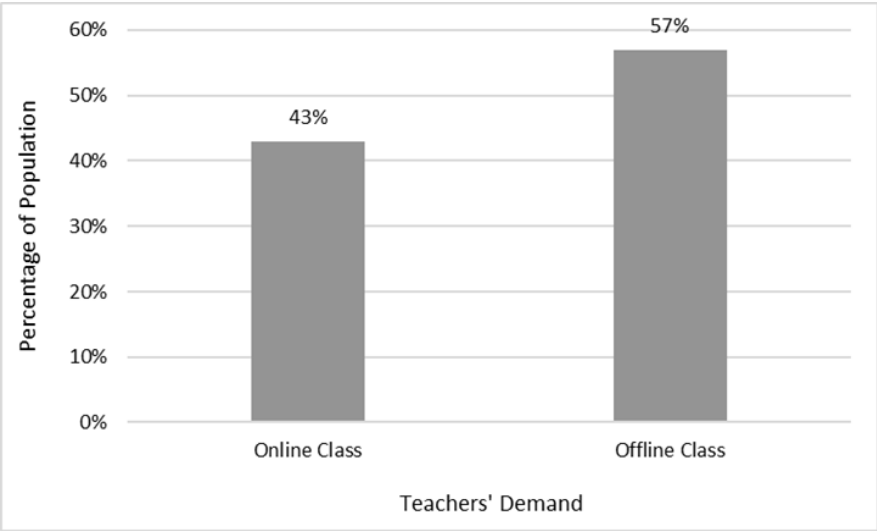
From Table 10, it can be seen that, from the teachers' perspective, 19% of students got used to knowing about Zoom, Classroom, and Google Meet and 15% of students were able to be efficient with different types of software due to online classes. However, only 8% of the teachers thought that, due to online classes, the exam schedule was maintained and 20% of students would not face any session jam as they were given online exams.

Looking at the negative side, it was found that 27%, 22%, 8%, and 7% of the teachers faced mental health, eyesight problem, hearing problem, headache and insomnia due to constantly looking at the screen of the devices as electrical devices radiation was harmful to their health. Moreover, 9% of the teachers were mentally upset as they did not receive their full salary during this pandemic situation. But, 10% of the teachers thought there were no negative sides to online classes.

The Teachers' Demand

Figure 10 shows the demand of the teachers who participated in the survey. The X-axis indicates the teachers' demand and Y-axis shows the percentage of the population. From the figure, it can be seen that almost 57% of teachers wanted offline classes. The main reason for demanding offline classes was that they faced difficulties while taking online classes. The difficulties could be a lack of technical knowledge to conduct online classes or getting no opportunities from their institutions. However, 43% of teachers wanted online classes because of the COVID-19 pandemic.

Figure 10
The Teachers' Demand



Conclusion

This article has shown the data that quality and timely interaction between students and teachers, technical support availability, structured online class modules, and adjustments to allow the conduct of practical lessons are essential factors in teachers' and students' satisfaction with online classes. Education is one of the basic needs of people, but students and teachers are deprived of necessary facilities that are needed for continuing study during the COVID-19 pandemic situation. Almost half of the teachers and students wanted to go for offline classes as they did not get enough technical support from the government and educational institutions. Government should give enough facilities to the educational institutions so that they can provide them to their teachers and students. Moreover, a question arises on the effectiveness of the online classes. To make online classes more valuable, a structured online class module should be given to the students. Educational institutions should give emphasis on making necessary adjustments to conduct theoretical and practical lessons. The students were vulnerable as they faced session jams, which affected their studies and career. Hence, most of the students faced frustration and disappointment in their lives. Furthermore, some students committed suicide as they lost hope. It was the government's responsibility to provide vaccines for the teachers and students so that the educational system could be normal.

Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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