Performance and Challenges in Online-based Education:
Three Bangladeshi Private Universities in concern

By

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The thesis is submitted for the MA degree at BRAC University

Department of English and Humanities

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January 2021

Declaration

It is hereby declared that

1. The thesis submitted is my own original work while completing an MA degree at BRAC University.

2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.

3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.

4. I have acknowledged all the main sources of help.

Student's Full Name & Signature:

_____
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Approval

The thesis titled "Performance and Challenges in Online-based Education: Three Bangladeshi Private Universities in concern" is submitted by Ahsan Uddin Tohel (19363007) to the Department of English and Humanities in partial fulfillment of the requirement for the degree of Master of Arts in ELT and Applied Linguistics on 10 January, 2021.

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Abstract

Information and Communication Technology (ICT) enhances learning and teaching. With the recent Corona Virus spread all over the world, communication and sharing contents through internet has become the need of the day. This study focuses on the manifestation of formal education and learning through the use of internet in Bangladesh. The results from the study show the classes and learning on virtual platforms and the ongoing practice have not reached the level of appreciation. The scenario of extensive implementation of online-based learning and related practices is not widespread yet. Though the necessary tools for online-based learning and teaching are affordable to most of the students, the motivation of the learners are not up to the mark. Results also suggest that there are positive attitudes among the participants who have comfortably attended and performed in online-based classes. They believe such classes can be arranged regularly along with the face to face classes. Possible reasons and the implications of the findings along with the manner the study carried out have been elaborated and discussed on the main paper.

Keywords: Learners; Educators; Physical classrooms; Internet connection; Digital classroom.

Dedication

I dedicate this work to my father, Abba, who died on August 5, 2017. He would have been very happy to witness me doing a second Master's Degree in English. Abba wanted me to be a professor at a university. I wish an extra-ethereal message reaches his soul.

Acknowledgement

I cannot be grateful enough to my thesis supervisor Md. Al Amin, PhD, Assistant Professor, BRAC University, Dhaka. His incessant support and good guidance activated my full strength for the undertaking. For the thesis, we could not meet and sit in person. However we have been connected remotely.

The faculty members of the Department of English and Humanities, BRAC University turned to be great resources during my MA program at the university. I owe to them. Besides, my batch mates and peers also helped me a lot in surveying for the thesis and gathering necessary data. I am immensely thankful to them. Moreover, I express my gratitude to all the participants who helped me in the study. I am thankful to my contacts at Leading University and Metropolitan University in Sylhet.

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List of Acronyms

ICT   -   Information and Communication Technology

MOOCs – Massive Online Open Courses

LMS –   Learning Management System

F2F –   Face to Face

Chapter 1

Introduction

Owing to new technologies and worldwide adoption of the internet online education through various modes has been growing steadily. It is happening in every nook and corner of the world where they are well oriented with internet and have smooth access to World Wide Web. Bangladesh is not an exception. There is already the culture of Technology-enabled learning and education in Bangladesh. But my present study will focus basically on teaching and learning through some video-conferencing apps like Zoom, Google Meet, through emailing and networking site like Facebook and even any available customised Learning Management System (LMS) by the three universities. Henceforth, an intense collaboration between the researcher, teachers and students is vital to the completion of the study.

Many high-stakes decisions related to education came into a standstill due to the novel coronavirus pandemic in 2020. Educational institutions are planning for myriad of method to adapt and farther the education of the students in all the levels.

1.1 Context

As *Digital Bangladesh* has become a household term for Bangladesh, many sectors are enlisted for digitalization. Education sector may not have already digitalized yet here. The culture of online courses and classes were practiced by few corporate groups like Bdjobs.com or other who often offers courses on skill or professional development. However, with the recent pandemic called Covid-19 Online Education has posed as the need of the hour. Online classes, courses and programs have become the go of the day, especially for elementary schools, high schools, colleges and universities. There are students not used to this learning style. Moreover, the internet connection and power supply in our country spanning from urban areas to suburbs

and to the rural areas may not be qualified enough for delivering the materials to the students. It affects the understanding and progress level of the students in a given semester or trimester.

1.2 Aim and scope of the study

This study is intended to be carried out from July 2020 to December 2020 surfing thoroughly through the realm of internet- based education and observing the online ways of education in few private universities of Bangladesh. The study weighs the availability, accessibility and credibility of Online Teaching and Learning facilities in present Bangladesh showcasing the cases of three universities. It is focusing on online or internet based teaching and education programs in the universities namely BRAC University (Dhaka), Leading University, Sylhet and Metropolitan University, Sylhet. Study on such issues is a contemporary concern now among the academicians and educators.

My study explores online- based learning and education to show path for a stronger online-education in future. The exploratory venture is supposed to be more specific about online based education. There have been myriad of problems and challenges claimed by many that already invade the world of online teaching.

1.3 Clarification of the terms

Online- based education is now a days a household concept in Bangladesh. It has not been so prevalent in the domain of education, except in technical and ICT sector, before the present pandemic. Online-based education is a new-normal method of education where education is taking place online mainly. It distinctly differs from electronic-learning or e-learning which has been a less formal type of learning run through electronic media. In online-based ongoing education in Bangladesh learning and teaching take place through the use of internet as the physical classrooms and face-to-face classes have come into a standstill for a while due to the worldwide pandemic.

To reiterate, *Online-based classes* are not intended to mean the Distance Learning, a classical system for education even in Bangladesh, in the paper just because we are staying at distance for such classes. We are in fact maintaining distances reasonably.

The word *performance* in the thesis title is used to mean the action and activities of the teachers and students to attain the set goal. Can they successfully carry out the duties and responsibilities from their end? Are the learners and the mentors meeting their end through such type of online education?

Last but not the least, the word 'Challenges' in the title refers to all the setbacks and the constraints in such new approaches to teaching and learning. To give hint about few - a real-life face-to-face discussion has been replaced with the advent of online discussion in online-based education. Besides, for learners, computers at home might be an unaffordable possession for few.

Above are the key terms that dictate my basic concern in this study. There are other intangible aspects from online-based education that would see a general eye-opening discussion.

1.4 Organization of the thesis

This thesis paper has been modelled into five chapters which maintain a sequential arrangement. Chapter I is the introductory chapter that consists of general area of investigation, scope and motivation of the study, sketch of the methodology along with the overview of the total arrangement of the paper. All the necessary details and description of key ideas or terms are going to be included here to set the stage for the subsequent chapters. This chapter answers 'What is this all about?' from the very beginning.

Chapter II titled as *Literature Review* covers the theoretical scaffolding of the thesis that has been chosen for study. It includes context of the study, the existing debates and research questions for the study.

Chapter III presents the Methodology of the research. It shows the strategies and approaches used to carry out the whole study. It has elaborate segments to discuss about the participants, the methods of data collection. It also includes the ethics approval during data collection.

In the following chapter, Chapter IV, study data is presented and discussed. The key analysis and discussion basing on the data takes place in this chapter. The chapter is of great importance to the whole paper.

The final chapter sums up the preceding discussion from the earlier chapters to conclude the paper. This chapter hints about some future aspects and works based on the present work. It includes a note on the limitation, if any, of whole work.

Chapter 2

Literature Review

This chapter reviews some existing research or dedicated works on online-classes that have been carried out by others. After categorically arranging the contents of the existing literature, it tries to specify the area or areas to be worked on. In the context of Bangladesh when this thesis was commenced there have not been a lot of works that specifically shed light on the online-education culture of Bangladesh. Nevertheless, no stone was left unturned to find the relevant works for this thesis.

2.1 Technology for education

ICT (Information and Communication Technology) has gone a long way with the regular breakthrough in the field of science and technology. The use of Technologies among people from all walks of life bears the evidence to the claim. A great advancement has been noticed in the application of technologies in education sector along with other flourishing sectors like economics, administration and other public policies. Teachers in many developed countries have already realized the vision of e-classrooms. Students there are accustomed to the online guidelines and dictation from their teachers. The technologies and gazettes are in their hand reach. They have no problem accessing or switching immediately to such vast domain of alternative form of education.

People possess technologies. They own multimedia mobile phones and other portable and wireless devices. A great mobility has been possible because of the latest technologies. Students can attend the online classes on the go if they have internet connection. In many countries, technology-supported education is rendered a 'go' signal from the policy makers and educators. At least, we see technologies have the ad hoc adaptation strategies during this

crisis and beyond. Ministry of education and the associated departments in Bangladesh have also nodded for such alternative solution when it has been urgently felt.

So, let the initial discussion get started taking *A Pragmatic Consideration of E-learning programmes* by Eman Hossain et al (2012) into consideration. It has been more than eight years since the study where he asserts, ''it is true to a certain extent that e-learning has not become so popular''. (Hossain 2012, p-34). He and some other writers discuss mainly about Bangladesh Open University's (BOU) distance learning programs when considering ICT or technology-enabled learning and education. E-learning is the electronic-learning. The online-based learning varies from e-learning that are discussed by them. Online-based learning depends much on high-speed internet connection and strong bandwidth signal. With the boon of digital technology, online or internet based learning can diversify the education system for the maximum result.

My focus is to measure how far the Online-education culture, a particular form of e-learning, has sprouted, not only through BOU programs, in this time of Covid-19 situation in Bangladesh.

The thesis must not be confused with confused with E-learning practices. Nevertheless, Online-based classed now a days at the university level are driven by the very idea of E-learning.

Mason (2002) categorizes the whole E-learning in three different approaches. They are tabled below. The common determinant for all these types is the online or internet technology.

Web-based E-learning	Supervised online training	Informal e-learning
Content-focused	Students-focused	Group-focused
Delivery-driven	Group work	Practice-focused
learning by individual	Smaller group activity	Structural learning
Least interaction with educators	Interaction with tutor	Peer teaching
No teamwork	Extensive peer interaction	Multifarious interactions among peers

Table 1: Types e-learning

Bangladesh have been doing well in informal online education or E-learning in such a form or manner that seems to uphold the practices of E-learning tabled in the right most side and the left-most side above. It looks like a combo of them. Informal education based on the following sources are not imposed upon and they are often free to share. Online-based educational outlets and portals that feature some elements of learning are already known to people. There are *10 minute school*, *Repto*, *Eshikhon*, *Shikkhok Batayon*, *Educarnival*, *Shikkhok*, *Muktopaath*. They have videos on academic subjects, professional and skill development courses. They are completely free of cost and accessible from any corner of the world.

Muktopaath, a government maintained website has amassed a lot of useful tutorials for different professionals.

Shikkhok Batayon has been planned by Access to Information (a2i) and Information and Communication Technology Department of Bangladesh. It is a government supervised

portal that has around four lac members now. It is a very rich website for learning. Their contents are abundant on myriad of subjects.

2. 2 Challenges in using modern technologies

Modern technology increasingly creates new challenges in various professional development and practice. However, in teaching, the mere adoption of new or innovative technology is not enough to meet the students' learning needs and opportunities. (Khan, 2014). As there are different type of learning and teaching strategies. Many pupils learn in a myriad of ways. In a certain classroom that used to take place in the pre-pandemic time, we know there are different type of learning psychology and learning theories at work. Pedagogic delivery of contents online matters a lot in education. Educators are predictably counting on hurdles to enable learning through internet and other devices nowadays.

It is already recognized that ICT in education is a comparatively new arena in Bangladesh (Khan, Hasan & Clement, 2012). Thus, online-based learning and teaching and e-learning are the need of the hour for any third world country like ours. However, focusing on the challenges faced by the educational institutions is not the specific concern for this thesis.

The study is, so to mention, involves discussions on mass use of technological tools and online-contents by teachers for teaching and by learners for learning. It is aimed at to unearth the active use of ICT in teaching and learning in Bangladesh when there are fewer alternative left to us.

As a developing country we are still in the course of considering the value of ICT whereas most of the Developed countries had started extracting maximum benefit from such sector. They started integrating ICT in education sector much before we cater on the idea. Here, I have focused on issues related to learners only, as online education in its complete form is a very recent phenomenon for most of the universities in Bangladesh.

This study intends to depict the emerging scenario of incorporation of online-based education along with traditional classroom teaching in Bangladesh. As we realize that we still have dearth in installing high tech infrastructure to switch immediately to the information superhighway. This infrastructural development is the key to the technological revolution in the shortest possible time.

With the installment of submarine cable with the optic fiber technology in 2016, it is expected that telecommunication through data transfer would have been faster and affordable. Possibilities of distance learning and learning through internet have become a reality to most of the learners from then on. Nevertheless, the high-capacity submarine cable that connects Bangladesh with the rest of the world will remain a matter of awe if we do not update our knowledge effectively adapting with the latest technologies. The procurement of technology must bring up a change in the efficiency of the involved parties in knowledge dissemination and knowledge sharing. There must be a mass computer literacy first before we step totally on to the technological revolution.

2.3 Online Educational Resources

The trend of Online-based education has been evolving for a while. The notion of such learning must have common grounds. We know, from the discovery science and technology that learning can happen electronically. It is often observed to have flexibility, accessibility, interactivity on virtual platform.

Online- based distance education is a massive trend worldwide. However, Online-based distance education and training- learning system has not been yet the alternative of traditional face-to-face education. Besides, the technologies invented in lieu of this traditional education complement the existing age-old system. They are brining diversities to the mainstream system.

The study concerns about online- based education and learning in Bangladesh through researching It observes few websites, portals and sites that are working to educate the users who subscribe or enrol for learning and training. We are not only driven by a crisis as because board exams and semester final exams have been left suspended or delayed, we are heading towards a brand new miles stone ahead.

2.4 Issues in online learning and teaching

In an interview with The Business Standard (TBS) Brac University Vice Chancellor Vincent Chang shared his thoughts about online education. To answer 'In a post-pandemic world, how do you situate online education?' he asserts

> The pandemic took the world by surprise, and every university had to switch online overnight. So, in the short run, we had no choice but to go online. I think in the long run, online education will remain a vital component of education. (TBS, 2020)

Kebritchi et al (2016) identified three major categories of findings: issues related to online learners, instructors, and content development. Learners' issues included learners' expectations, readiness, identity, and participation in online courses. Instructors' issues included changing faculty roles, transitioning from face-to-face to online, time management, and teaching styles. Content issues included the role of instructors in content development, integration of multimedia in content, role of instructional strategies in content development, and considerations for content development.

Learners

Instructors   Contents
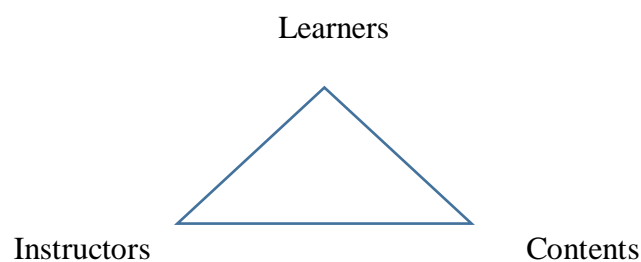
1. Learners' issues: Learners expectations often drive an education system. Learners along with their well-educated parents or guardians during this Covid find themselves at their wit's end when the outbreak of the virus hit all the sector of social life. Many learners have many minds that is they differ in attitudes towards a newer version of classes like these. In Bangladesh, students are yet to be habituated with such new-normal form of education. Learners' comfort and convenience carry the first consideration when initiating a course or programs in a quite different platform. We know about many types of learners in the linguistics program.

2. Instructors' issues: It is not like the pandemic only hit the students or learners. A lot of teaching stuff globally had to suffer for the pandemic. All of a sudden the staff are instructed to switch to online teaching to finish up any semesters or programs. A lot of teachers who were working in private sector in Bangladesh lost job because of the pandemic and uninterrupted lockdown.

   Teachers need to come up with newer ideas to suit the new platform of teaching. Teaching strategies need to be adapted as the lesson objectives or learning objectives remain same.

3. Contents: For online-based education the learning contents are not something totally changed. However the medium of delivering the contents to the students is different now. So, this is a matter of a great challenge for the educators to disseminate the contents accordingly to the learners.

Now, a lot of students participate in online classes to advance their study during this pandemic. But, questions emerge as there might have been change in their overall expectations in such platform of education. There are questions about students' availability online during

some compulsory classes. There are concern for their progress through participation. The alternative management of assessment need to have validity. Assessments need be valid, authentic and reliable be they through virtual arrangement. However, the ultimate goal of education is to make sure students are having ideas and perusing contents from the lectures offered. The question of assessment comes when there is good number of classes offered with success.

While Shafia and Iqbal (2020) 'attempts to gauge the need and readiness of various stakeholders to implement successful online education', they have suggested a process for measuring the readiness to give the policymakers ideas on areas of improvement so to launch full-fledged online classes that will be accessible and affordable by students during the Covid days and post-Covid days.

Online learning and teaching nowadays initiates and administers interaction between the learner and their teacher or peers. The interaction is enabled or supported by the use of digital tools and content. On such arrangements of learning students rarely or never meet face-to-face (f2f) because they study online. A sudden shift from very traditional and effective system of teaching into the new normal method of education based on online has brought forth some essential points in our mind. Through my simplified research questions I would unearth some necessary aspects of online-based education at the university level in Bangladesh.

Johnson and Aragon (2003) suggested that an effective online learning environment requires a combination of the following seven principles:

1. address individual differences,

2. motivate the student,

3. avoid information overload,

4. create a real-life context,

5. encourage social interaction,

6. provide hands-on activities,

7. encourage student reflection (Johnson and Aragon, 2003, p.34).

Researchers are pondering few of the above issues. Individual differences may not have been addressed in online platform. It is also tough to measure the load students having on virtual activities with their respective institutions or the assigned teachers. Speaking of hands-on activities, over on online many universities have strategies that cannot be endorsed for ultimate achievement

2.5 Thesis Focus

My study has reviewed some existing studies and research works as stepping stones. There has been a culture already in Bangladesh for many private universities to arrange for online classes through internet. But my research is meant to find out the tangible culture among the three institutions I have worked for my present study. No other researchers point out how successfully this method of online-based classes are upgrading the students comparing this with the traditional f2f classrooms. I would measure to what extent the teachers and students there got affected for the sudden transition to a newer method of education.

My study rather focuses on tasks we could have carried out so far with the readiness the two preceding writers showed. There are certain fields we still need to work to better the existing condition with the existing infrastructure of our country.

Chapter 3

Methodology

It is indeed a matter of utmost concern to select the approaches and design to a study or research beforehand. A good researcher would definitely prune his knowledge of different methods with every new study or project. It is a proven fact that a careful decision regarding the research design often eases the herculean task from the inception of a study. This chapter elaborates all the necessary details about the methods and strategies used for the whole thesis.

In Bangladesh universities have started online based classroom activities with the intention of carrying out the educational and administrative jobs. Now a days, internet posed to be a very important media to continue day-to-day learning. The number of courses taken by the learners are not significantly less as everyone aspired to finish their respective semesters.

3.1 Research Design

The study is premeditated as a mixed method one using both quantitative and qualitative approaches. However, as it appears that I deal more about the performance and challenges in online-based education, eventually it seeks for a detailed mixed approach for the study. So it is more of a Mixed-Method study. Questionnaire composed of all the relevant questions are used for the study. It is prepared keeping the key Research questions (RQs) in mind. In other words, The RQs are subdivided into essential other aspects which are relevant for the desired outcome.

Small-scale questionnaire survey through social media sharing and emailing would be used to collect required data. Questionnaire facilitates the integration in the overall data analysis. All methods and data are kept up-to-date to produce the best result through the study.

Online surveys are quick, inexpensive and yields an acceptable response rate. (Saleh and Bista, 2017). Online surveys are much used of late since the breakout of the pandemic in

2020. So, I would be utilizing the idea of Google form survey to reach to the participants on the go. To derive qualitative explanations with positive and negative effectiveness of the technologies the questionnaire survey is conducted.

3.2 Questionnaire Construction

Initially, the questionnaire is aimed at identifying the usage of different delivery technologies and tools used by the teachers and students in the universities. It involves gathering and reviewing of data from the respective universities of Dhaka and Sylhet in Bangladesh. The research questions consider effectiveness of learning and teaching on virtual platform. Questionnaires are used here to investigate the usage and efficacy of the online tools used by the educators and learners. Questions are set in such way that it shows us the preferences, needs and motivations of the learners.

With the help of the questionnaire, a brief discussion among the participants is generated about the internet-enabled applications and software from latest technology. This is to find out the mass users-permeability of the tools among the learners. In other words, the questionnaire was also circulated to find how much are these users oriented with the applications or relevant software. Besides, it is definitely a time of stress and heightened psychological situation. We can notice that the questions included the purpose of using internet technology for education, participants' opinion regarding proper use of internet, and about the benefits and challenges of such system now in Bangladesh. Some questions would bring up issues like this to the fore. Above all, the questionnaire let the participants pour in with more of their inner thoughts and feelings through the survey.

The questionnaire constructed on Google form for the study are annexed in this the paper for the considerations of the readers. Wording and phrasing in the questionnaire was done keeping the desired audience in mind.

3.3 Research Questions (RQs)

The key research questions the study will deal with are -

1. What is the situation of online based learning and teaching or education programs in Bangladeshi private universities?
2. What are the challenges students face on online based educational platform?
3. Are the classes delivered or shared online effective enough?

The questionnaire formulated on the basis of above questions was semi structured and is used to investigate the usage and efficacy of the tools and apps used by the educators and learners. Nevertheless, the survey was not intended to determine the mere orientation of the students with the essential technology for online-based classes. But, the overall responses from survey might also give us a good view on their possession of those.

3.4 Participants

Since the study is aimed to evaluate recent online based educational activities in Bangladesh it involves gathering and reviewing of data from students or learners who are supposed to have smooth access to materials or study contents through internet and who are attached with the recent mode of educational service. The participants were students from X University, Dhaka; Y and Z University, Sylhet. For this thesis, the participants include learners of different batches and departments provided that they have already attended semesters through online based platforms.

Ultimately, the tools and materials which used for online based classroom and class activities have been added for the community consideration about them and their use during the present new-normal reality. Definitely, all the existing technology affects some learning and teaching preferences. Their availability has usually been checked by the respective institutions prior to the initiation of some programs or courses.

3.5 Data Collection and Analysis

With the advent of digital technology and online communication the data were collected. The researcher did not need to meet participants in person. They are asked to respond to some open-ended questions some of which have some check-lists or multiple options.

For the study, few students were contacted out on email and social networking sites by the author. Students of BRAC from graduate and undergraduate programs have contacted first with the link of the form. They were reached through text messages and Messenger inboxes as these were preferred media for the most of the participants. They were very spontaneous to give their feedback. As the questionnaire was meant to find out how much learning is taking place through online classes, their responses are supposed to be impartial as they are in the receiving end of the system. Among them there are few teachers-cum- university students who are engaged in teaching in different schools. They use internet and other tools to arrange and offer classes the way their teachers have been doing.

Due to the outbreak of the virus, the questionnaire was administered in an informal setting. The participants were requested to answer questions as necessary by spending 15-20 minutes from their busy schedule. They could go anonymous if they do not feel comfortable to be identified. Nevertheless, they were very supportive during the study. Quick feedback from the participants expedited the study. They were given adequate time to free few moments from their busy life. The questionnaire was carried out for the span of two weeks. Within a

week a good number of the participants came up with their responses. Few participants spared few minutes even though they were busy with the exams at their university.

The questionnaire was presented to the participants so that they would express their opinion regarding the online teaching and learning through the available media that exist. The whole process took 10 to 11 days to be completed. The researcher collected the responses from the participants for further analyses. He had documents of all the individual responses which were used for the data analysis. These are subsequently preserved in Google drive.

The questionnaire is designed in such a way to have a perceptible glimpse about the future growth of online-based education and classrooms in Bangladeshi private universities. Of course, we cannot take a giant leap forward basing on a study on only three universities of Bangladesh but other enthusiasts can undertake farther studies to uphold the true intention of the present study.

The responses to the questioned have been rated on percentage to give a general estimate about the responses. But, open ended questions may not be scaled easily charting them on graphs. These questions produce various responses which are not far-fetched rather they depict an estimable picture for the researchers. So, the accumulated data are studied thoroughly for analysis later. Bar charts, pie-charts are used for the portrayal of the data.

3.6 Ethical consideration

The issues related to education and educational development need sincere consideration. By undertaking the thesis work, I assert my full determination to maintain research ethics during it. My study is not meant to violate any institutional rules or to defame any individual or groups. During the time of data collections, observations or surveying full confidentiality will be maintained for the ethicality. An assurance of maintaining confidentiality will be confirmed in written form in all documents or questionnaires provided

to the participants. Extracting materials from others and contents without due citation would be the least expected move from an honest researcher. As a researcher I also uphold zero tolerance against plagiarism or to any other intellectual immorality.

Chapter 4

Result

4.1 The Participants

Out of the 71 participants who had willingly responded to the questionnaire there were 54 students from universities at Sylhet district and other are from Dhaka. There are handful of participants who are Computer science and engineering students. Whatever their background is they have experience of online classes for a while.

4.2 Participants' reaction on online classes

Near about 99 percent of the participants attended online classes. As around 79 percent of them believe that online classes are easier to attend while only around 16 percent think classes are not easier to attend.

It is mentionable here that one among the three of the universities has better automated learning facilities than two other universities that I have picked for the study. The university has LMS or Moodle system prior to the pandemic that other two do not have.

The questionnaire might be sorted out categorically. Some of the questions in it are just about the available features of the online classes that are affordable or sometimes offered to them by the institutions they are studying in. *'Question 1. Have you been attending online classes?'* is such a question which only confirms that we are with the desired participants for the remaining part of the study.
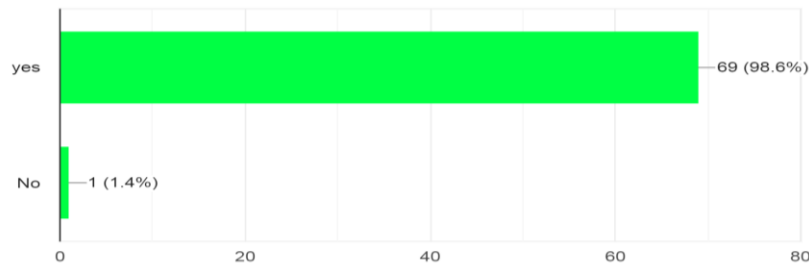
Figure 1: Have you been attending online classes

In fact online-based education has reportedly been started in most of the educational institutions in Bangladesh.

## 4.3 What do the questions elicit?

Question 2 and Question 3 of the questionnaire elicit the very basic idea of online-based classes and education and the affordability of such classes among the participants. Question 2 let the participants define the newer format of study. Responses to the question vary as it is rather an open-ended short question.

Only one respondent answered very elaborately to the question but others responded in short. Some of the responses are tabled below-

It's boring	*video lectures*	*Virtual class*
Zoom session	*Something interesting*	*Digital Literacy*
informal	*Pain*	*Progressive initiative in pandemic situation*
Best	*Learning in a digital way*	*Relax study*

Table 2: Responses to question about Online Classes

So, it derives mixed reaction from the participants. Many find such online-based education to be effective and convenient during the pandemic. Others find online-based, technology-enabled class arrangement to be boring and wearisome.

21
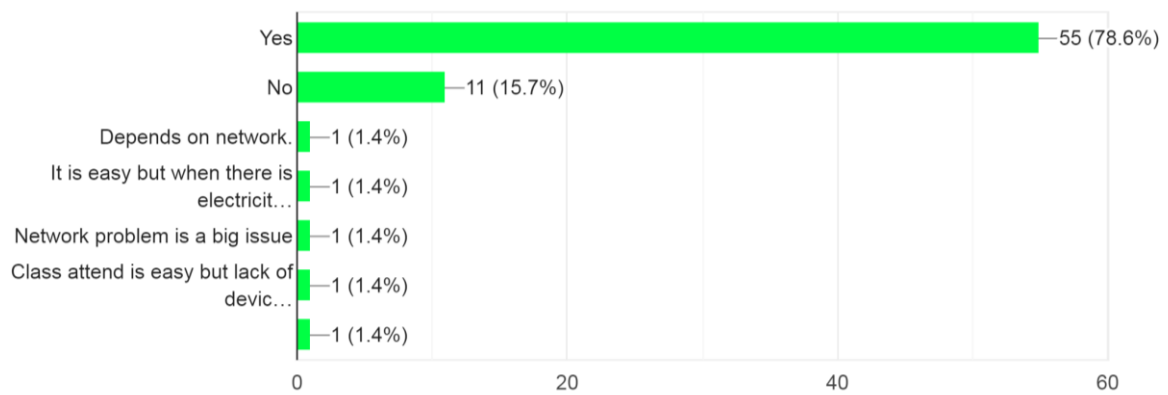
Figure 2: Are online classes easier to attend

Most of the participants reacted with a 'YES' (around 80 percent of the participants) when they are asked if attending online classes seem easy for them. However, few took the liberty of putting their opinion differently. Few complained about power crisis or device related constraints when the question of attending classes arises.

However, this might be seen from another angle; from the part of the educators or facilitator. Arranging classes is not the concern of the students rather educators and teachers are liable to that.

Questions 5 – Question 8 query about the external resources for online classes. Spontaneous responses from the participants show a very good picture of the external tools and necessary resources they own. They have been introduced by most of the educators and educational institutions for emergency arrangement of classes and lectures.

When the participants responded about the tools and technologies their teachers use, they mentioned that their teachers mostly choose these Zoom, Google Meet and WhatsApp.

Few of them mentioned about Google Classroom or Slack. WhatsApp has been very convenient for instant messaging in a study group. Teachers can reach to his students immediately via WhatsApp. Students from the university of located in Dhaka in our study also hinted about BUX which they use for course they attend in a semester.

4.4 Intuitional Support in Online Education

When students are asked about the support their respective institutions providing to them when they arrange for online-based semesters during this Covid time, most participants (around 28%) talk about Liberal grading and few others mentioned about longer duration of the semesters or trimesters. On the question of affordability most of the participants ensured that they can afford the tools and devices required for the classes. Out of the 71 participants 61 have no problem in availing the required tools. Few responded with some negligible remarks.
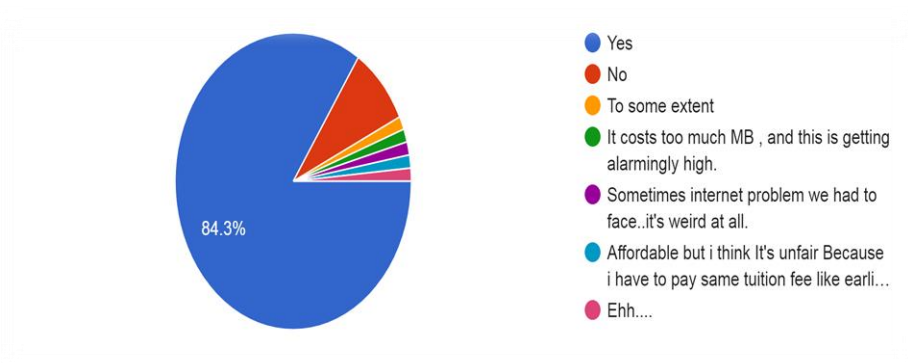

Figure 3 : affordability of tools and technologies required for online classes

Afterwards, the study puts forth some questions to the participants about the manner the classes are conducted and offered. Some classes are conducted live and some classes are recorded by the teachers and shared with the students later.

Our eyes pop up when the participants responded with diversified answers as they are asked about the class activities in online-based semesters. Definitely there are differences between online-based classes and traditional classes in Bangladesh. When the participants are prompted to draw a comparison, they talk about boredom and absence of liveliness or spontaneity in online classes. They say they cannot feel the real fun of doing any job or activity unlike a physical class. Though they have also mentioned the good feature of online classes. Few of the responses about online-based classes are tabled below-
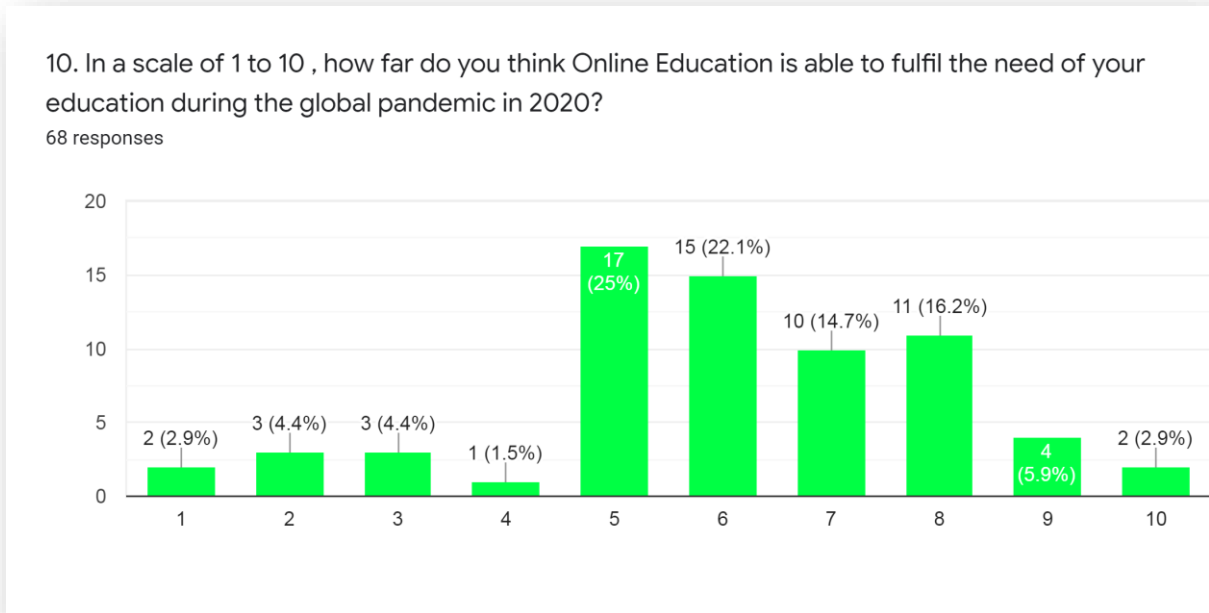
More assignments	*less opportunity to learn*	*less interactive in online classes*
no eye contact in online classes	*Presence is not necessary*	*classes are not mandatory*
Communication problem, Network Problem	*Student can easily cheat in exam*	*No physical expressions, no discussion with detail follow-up*

Table 3: Online classes Vs. Physical classes

The things that is clear from the responses to the above stimulus about online classes is that students cherish more fascination for the traditional classes than to the new type of online classes. Nevertheless, few admit that online classes might be convenient for some really good reasons.

1. As they opined it is not necessary to attend classes physically during the Covid-19 outbreak. It somewhat relieves the parties and the stakeholders involved in education sector during the frightening days of the pandemic.

2. Zoom and Google Meet sessions can be arranged in a matter of seconds provided that there is good bandwidth availability for internet.

3. They say that they can relax at home and continue their study.

4. Reduced tuition fees is also appreciated by few.

10. In a scale of 1 to 10 , how far do you think Online Education is able to fulfil the need of your education during the global pandemic in 2020?
68 responses

Figure 4: rating

Question no. 10 shown above gives a glimpse on what is so far achieved through online classes. The participants definitely attended such classes. They can grade such classes. More than 22 per cent of the participants think 60 per cent effective.

The educations and policy makers along with the general masses of the nation are questioning the grading system of the online-based education. Students are confused about the emerging system of grading. This is a general notion. The survey consists of queries keeping this grading and assessment in mind.

Participants came up with mixed reaction to such query. Some comment that grading is maintained average on the basis of already achieved grade (if any) by a student. Some complained about poor grading by their teachers. They rather expect liberal grading from the examiners as online classes cannot pull back their high performance. There are few among the

participants who also note about cheating in online test. This is perhaps a matter of another study in future. So, ultimately participants are not very much satisfied with the grading in this system.

4.5 Other relevant issues

With the advent of online-based teaching, which has been introduced for the institution to advance education uninterrupted, myriad of issues come into limelight. Psychological issues in pedagogy and among students would definitely keep the researcher busy for a while. The questionnaire for the present study includes question like 'Do online classes create any mental stress or anxiety in you?'. The responses to the question is really interesting. Near about equal number of participants answer with YES and NO while around 22 per cent of them are not sure whether it really creates any such mental anxiety or stress.

From the responses to the above question it is not certainly claimed that online-based classes are definitely creating stress though 28 out of 70 responses to that answered in affirmative. We can say 'yes' as it is creating stress and mental pressure to some extent if not totally.

Later, the participants are asked '*Can you mention few barriers in online-based education?* And this question elicits the challenges for online-based classes that are felt by the students.

Among the barriers the technical issues related to power and internet crisis rank top in the responses. They also add up the cost of internet with that. A few of the students mention about the lack of physical interaction in online classes.
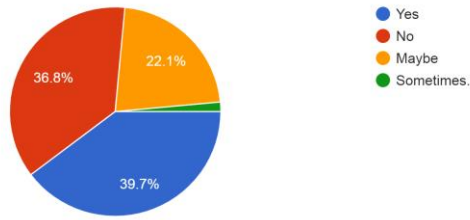
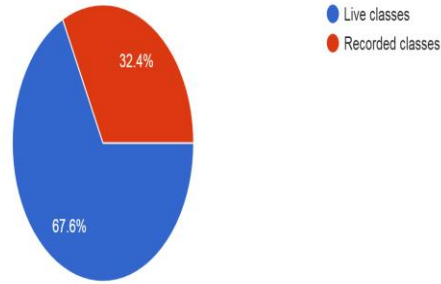*Figure 5 : mental stress or anxiety created by online classes*

Figure 6 : Students' preference of classes

In the survey, 46 out of 70 responses vote for live classes. Afterwards, when asked about whether learning takes place in online platform, around 50 per cent of the participants from all these three universities answered in negative. Only 20 per cent or so believe learning is taking place in online through this emergency alternative for the age-old traditional pen and paper classroom learning.
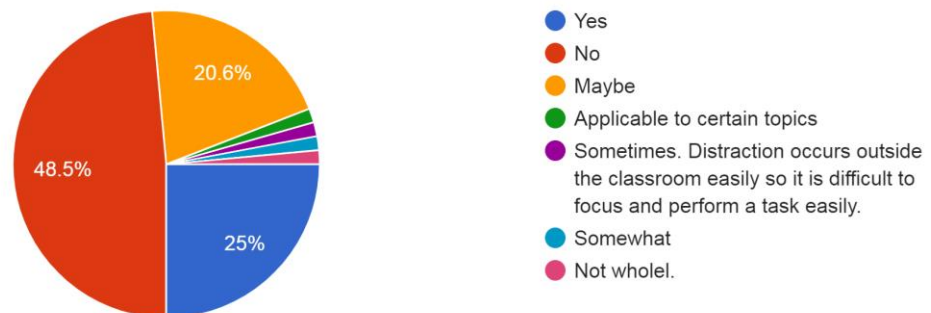

Figure 7 : Do you think learning takes place in online classes?

As a result of all these above responses so far shown in support of online-based education, it cannot be proved that online-based education can be suitable for the traditional classrooms in our country in tertiary level. Almost 60 per cent among the participants responded with an emphatic 'NO' in this regard.
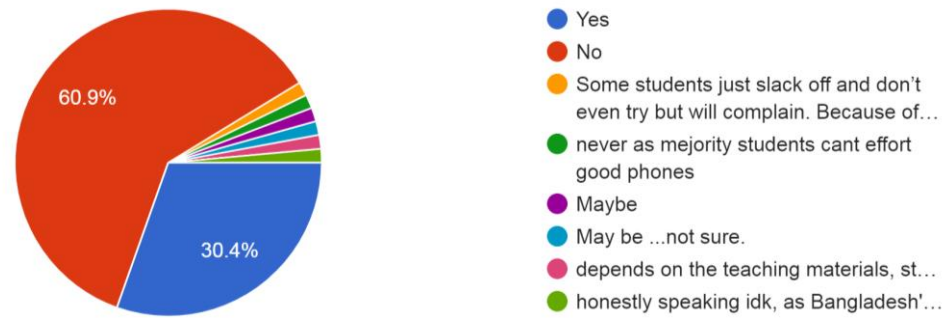
Figure 8 : Is online education suitable for tertiary level in Bangladesh?
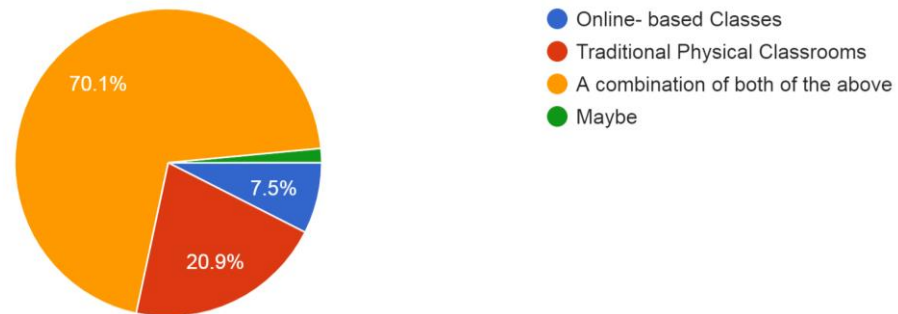
Figure 9 : Students' preference for future

The participants do not think that online classes can out-value traditional pen and paper education in our country. That means, a lot of them still value the traditional classes over the online classes.
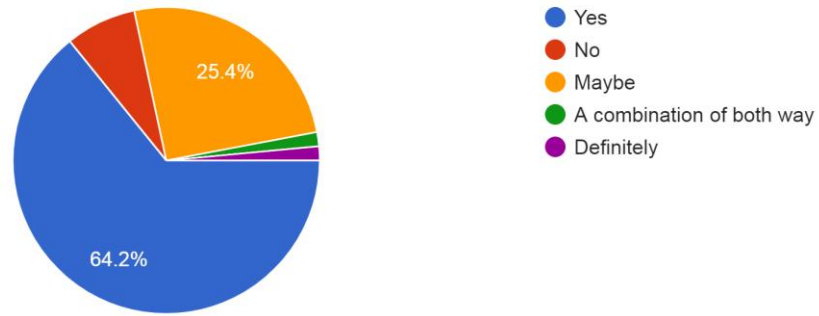
Figure 10 : Is a thorough change required for total online education?

Finally, most of the participants inform us through the survey that Bangladesh education system needs to go through a thorough change to embark on such online-based education.

Chapter 5

Discussion

My intention is to find out how effective the online teaching and learning is. This is really a matter prolonged study to find the actual effectiveness of such education which has been in vogue very recently. I have not aimed to discover the approaches to effective online teaching rather the total effect of online based education at tertiary level.

1. **Attending and availing online classes:** In fact, it has been seen in elementary and secondary level, teachers and administrators have been in a fix regarding continuing the education immediately after the sudden closure. And we see education institutions like schools, colleges and public university have come into sudden closure without any immediate solutions for emerging problems. Private universities like BRAC and few others have been in online platform along with the traditional f2f classes for a long while. They could initiate and administer the alternative online platform without much ado.

2. **External Resources for online-based classes:** The participants mostly own and use computers and mobile phones devices. Besides, they also choose applications like WhatsApp, Messenger, Zoom and Google Meet.

   WhatsApp provides multimedia messaging service which is much known to all. Messenger of Facebook is user friendly and provides messaging service. Zoom and Google Meet are two of the application accessible in computer and mobile phones. Facebook as a networking site have been used for sharing class materials and recorded lectures beside common notices during a semester. Facebook has video call system that may not work for a large class though. To run the apps teachers and students mostly use PCs and Laptops. On another note, the participants have hardly any tangible support from their respective institutions which they manage by themselves.

3. **Online-based Classes for the tertiary level:** From the responses we come to realize that around 17 per cent of the participants believe that online-based classes are able to fulfill 80 per cent of the emergency education now. Their education could go beyond pandemic crisis and keep them on track. On online-based education students prefer Live Classes to Recorded Classes. It shows that students appreciate a well delivered classes in real time. Nevertheless, online-based education cannot replace the traditional classrooms in tertiary level. At least, 6 out of 10 students cannot endorse online-based classes for this.

4. **Barriers in online classes:** Most of the participants complain about poor network for online-based education. Besides, for learning at university, coming closer to study mates has been very vital. Covid-19 spread is being prevented by detaching ourselves from our peer or colleagues. So, in online-based education classroom interaction needed to be compromised which is a barrier to learning. Pedagogically, coming into physical proximity during classes enhances learning and enrich learners in socialization which is a part of education.

Students own the necessary tools which are required for not-so-sophisticated online classes. However, the infrastructural support is reportedly not available to the level of requirement. Internet has been a big issue in achieving a full-fledged digital Bangladesh. Internet and poor connectivity pull back a necessary system like online classes.

So, unless we overcome the infrastructural constraints regarding technological support students or learners would not be able to appreciate online-based study whole-heartedly. Online-based classes started in our country and attended by the students as they are urged to. They have been attending such classes so that they do not drop semesters or in a situation to go for retaking some courses later. With the existing infrastructure there have been limitation in performance. The result that has come out from the study illuminates our thoughts. Online-based education has not become a full-fledged and complete

alternative for education now. It is a matter of time that these online classes might satisfy everyone who are involved in such educational system.

The participants spoke up about their mental condition like Stress and psychological pressure. Jacobs (2013) from Sacred Heart University, Connecticut, asserted that 'Online learners have been known to experience disappointment and become anxious. Focusing on motivation can help reduce such feelings.'

On the other hand, teachers cannot be kept in dark when the tactful use of technology is in concern. Teacher training can also be arranged on urgent basis to equip and train them with necessary knowledge and strategies for more fruitful online sessions with students. Teachers can bring innovation in the approaches to teaching. They are often advised to keep contingency plan for any possible situation. During this Covid time they are also hard hit. They are asked to deliver lectures online. Teachers are committed soul for the development of education. They do not leave the job unattended or half done. They may have few barriers as well. Their approach in developing the education sector should be smarter.

To wrap up the discussion from the data analysed- the participants really champion an idea of amalgamation of f2f and online-based education. They opined that the combination of both type of education can be a good system for future. Both online-based education and the traditional face-to-face classes can be planned interchangeably in future. Less than 10 per cent of the participants want to continue their future education in total online platform. However, living in this Covid era with all the uncertainties, we may not predict the future with assurance.

Chapter 6

Conclusion

5.1 Summary and Recommendations

No well-articulated provision for online-based education has been in our education policy. The Pandemic was an event uncalled-for. The inception of online-based education is definitely a great move by administrators in different institutions. Universities following the recommendation from health department decided to continue educating students. It is laudable.

Vision 2021 asserts that we will create an educational environment where students as well as teachers can concentrate on education without being held hostage to party politics if we aspire to establish an internationally competitive education system by 2021. As according to the visionary statement of the People's Republic of Bangladesh, the education needs to have the utmost priority. From the first- hand experience as a student I realized the contents and strategies used for online-classes need to be discussed deliberately. The intention behind thesis is noble. If online education needs to be implemented massively for upcoming days, we can be ready enough to know and address our ways and agenda very well.

Thesis like this gives enough food for thought for the teachers and material designers. They might need to adopt newer version of educational activities and contents. Undoubtedly, adapting with the situation with all the contingency plan for to arrange classes would be marked as the strength in them. Taking all the students into account is definitely a matter of challenge for them.

The ultimate goal of this thesis was to know the level of effectiveness online-based education could be taken to. I cannot study all the universities in Bangladesh when we have academic constraints and limitations for pandemic at present. I have undertaken the study with a limited number of institutions from two different geographical locations in Bangladesh-Dhaka and Sylhet. Students from three well-known universities in Bangladesh have become the participants for my thesis. With all these constraints, the participants have shared their thoughts without any hesitations. My thesis has not given any unnecessary trouble as the

participants are reached through online. This thesis was not only intended to find out the barriers in online-based education that is happening in many of the universities now a days but it tries to bring out an overall impression from the pupils who are engaged actively in such type of education. I have tried for a full-fledged thesis from the beginning and the title is unanimously a matter of interest to students and educators. Few other researchers also took a great interest in capitalizing the idea of online-classes during the pandemic. They have been working under some situations like me during the pandemic. This situation asked for more than LMS or MOOCs that were prevalent in the online domain for learners and course- takers worldwide. MOOCs and LMS have not been the alternative for traditional classrooms or formal structured educational programs that we have noticed in Bangladesh. But time has been so ripe recently for embarking onto such online-facilitated education nationwide.

There are notable number of technologies that are possessed by learners and educators in developed countries but a developing economy like ours may not have ensured availability of them when we need them. We are delivered with the latest technologies when we realize the need of them though they had been available in rich countries. Even with the limited resources we are trying to cover our educational needs. Equipping students after equipping the teachers is a must. Students cannot only attend Zoom or Google Meet session and take it for granted. To interact with teachers they need to have all the tools for participation. Private university students often have less difficulty in arranging necessary devices.

Training teachers with ICT knowledge has been placed in our discussion just to ponder over the outcome of such training among the educators for a long time offered by the government. ICT is no more an idea in the education sector rather the administration of ICT through online classes and internet connection has become the new-normal for the people involved in education all over the world.

When we can ensure all the students strong internet connectivity, their opinion about online-based education might be altered. A lot of pedagogical strategies and improvement in the technique which are yet to be administered by teachers and educators might satisfy some students.

Managing learning online-based education requires a maintenance of total system. Learning online is not attending classes through Zoom or Google Meet with interrupted connectivity. It requires the management of group tasks, arrangement for individual or group assignments, organizing a rigid assessment system. Sometimes, class activities and group interaction compose the necessary education. These are visibly not prevalent in online-based instructions.

Grading and Assessment as a whole are considered with raised eye-brow as they are not maintained or performed to the level of expectation of the course or test takers. Some of them condoned the grading as some teachers reportedly maintain average grading to complete the required assessment. But universities are not very strict in grading as the administration asks them to be liberal for the sake of the crisis created by the pandemic.

For concrete learning online-based classes are not recommendable yet as the infrastructure for such learning is not consolidated in a very short period of time. Online-classes that started in Bangladesh as emergency responses to continue the semester of the university goers have further path to travel to meet the end of tertiary level of education. This thesis has unearthed some problems in such education that need a religious considerations from the policy makers. We had been talking about digital Bangladesh since long, but not being able to ensure quality education for the lack of digital tools might pose like an irony.

Students have been attending online classes as they are asked to attend and they had no choices. However, the aspirations of the students cannot be ignored in the name of pandemic

and educational management crisis. So, the thesis have partially surveyed whether there had been some sighs and sorrows among the students.

Attending all the online classes is not a must as the university relaxed this due to the poor connectivity. If classes are recorded in Zoom or Google Meet students can later check out a lecture they miss any class accidently. Attending online classes is easier than attending physical classes. Using a link for a session the students can attend class staying at home or being in the go. There is a chance of group discussion in Zoom breakout room where students in group can share their thoughts. The breakout rooms are virtual.

In online based lectures, there is no difficulty to record a session. Even prerecording lectures and circulating them among students also works. However, synchronous learning really gear up total online education. Students and teachers interact at the same time sitting in different places.

The findings from the thesis inform us about possible future undertakings. Addressing some noticeable barriers and the challenges can really take the total education ahead. The pandemic period might end any time sooner or later but the teachings it disseminates among the people all over the world must be considered for any future calamity. For the time being we may assert that we are ready for the arrangement of online-based classes as we cannot predict the ending of the pandemic. But we can manipulate the way learning is taking place. Teachers can initiate some interactive activities even online classes. Applications like Google Classroom, Kahoot, Quizlet.or Padlet are few of the interactive tools to utilize during the online sessions with students. Successful demonstration of such applications can bring back joy in Covid-infested lives of the students. Not all the applications or software suit all the stages of education. They can be customized and used accordingly. Some universities need to go through a rigorous change to set out for the new expedition of such learning format.

5.2 Limitations to the study

Only university level is taken into consideration here. Research could have been started from the elementary level. Besides, I have not found a lot research theories for online-based mainstream education as it has not been an issue of utmost interest. So, the foundation of my work could have more solid had there been more theories available for me. In the context of Bangladesh only handful of studies carried out recently which have not address the university education in the first place. Other methods for surveying purpose can be carried out though I have only circulated an authentic survey materials among the participants. Face to face interviews with some participants might consolidate my study. Engaging teachers who are very vital part of whole education system might enrich the findings for a guaranteed picture regarding online-based education.

Arranging for lots of other data collection method is not an easy thing now. As a researcher I cannot go door to door to the participants during this Covid time as it involves health threats.

Because of time constraint and ongoing Covid situation, I did not manage to get responses from a large number of participants for data collection. Thus, the study might have limitation. I might have included a few university teachers for the study which would have provide a better view of the status quo. I have not focus in detail about the psychological aspects in online education.

5.3 Direction for future Research

The thesis is not complete in itself rather it paves way for further full-length and categorical research. Many aspects of learning and teaching appeared in the discussion of this thesis. In future those aspects can be studied separately for dedicated discussion on them. So, more narrowed down issues can be sorted out. For example, assessment is a very big deal in academia. Assessments of students during this Covid period can be studied very specifically to decide about a unified method of assessment along with the online classes. Similarly, Interactive classrooms online can be prioritized for a future study. Challenges that have been brought forth may vary from the challenges teachers or other stakeholders in education facing. Teachers need certain skills to contribute to the effective management of online-based education. These might be a matter of future discovery. Whatever we have gathered so far might be seconded later by other stakeholders. Teachers and university faculty members need to invest enormous efforts for online-based lectures and classes. Their insight might excite more realistic notion about the overall system in future. The present study can be expanded to give it more credibility.

To recap, the question of 'being effective or not' lingers on until a survey of greater domain carried out when many more universities will be taking part. But so far my thesis proves that online-based education that has been in the vogue for last couple of month cannot excite the learning of students. Online-based classes are not very comfortable medium of learning for students in comparison to traditional classes. Some students feel they rather go back to the traditional classroom lectures so they enjoy the co-existence with their peer in real life.

The policy makers and the stakeholders cannot sanction a system which may not bring all-out success for the students. Students cannot be treated like guinea pig and the valuable time from their university life should not be sacrificed in the name of some test-drive.

The challenges students face in online-based education are not subject to overnight solution. Students' much interests in a combined educational management (both online classes and the traditional classrooms) must be a matter of consideration for educational policy makers. If convergence of face-to-face and online-based education let the learning take place then the convergence may be in the very next agenda in policy change. At least, not the whole part would then have the chance to fall. Nevertheless, through a thesis like this we can depict some pictures for the policy developers and change makers.

Online-based educational activities throughout the year would be a boon for the emerging nation like ours. It is high time we considered such virtual arrangements. For our education to adopt something new and adapt with the emergency, there would not be any progress if we take online-based educational activities for granted. We can start from here anew and set up a new-normal policy for the best educational system ever.

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Appendix A.

Performance and Challenges for Learners in Online-based Education

Dear Peers/Participants/Attendees in online learning,
My ongoing thesis titled 'Performance and Challenges for Learners in Online-based Education' that concentrates on few universities needs your wise discretion. I have intended to find out the effectiveness of such emerging education in Bangladesh.

Please, feel free to contribute through your well-thought responses. It will not consume a lot of time and I am ensuring unconditional anonymity about your identity and individual responses. I express my gratitude to you in advance.

PS: For any query or any sort of confusion/suggestions about this questionnaire, please reach me at tohel32@gmail.com.

1. Which program and what semester are you attending?

2. Have you been attending online classes?
3. What comes in your mind when you hear something like 'Online Education' or 'Online Classes'?
4. Are online classes easier to attend?
5. What are the tools and technologies required for online classes?

6. What platforms and tools do your teachers use for online classes?

7. Are the tools and technologies required for online classes affordable for you?

8. What support(s) does your university provide for online-based education/classes?

9. Does Online-based teaching and learning vary from university to university in your country? (Please, if necessary, explain in short)

10. In a scale of 1 to 10, how far do you think Online Education is able to fulfil the need of your education during the global pandemic in 2020?

11. How are the class activities or work in virtual classrooms (online classes) different from physical classes?

12. On Online platform, which classes do you prefer - Live classes or Recorded classes?

13. What is your opinion about the assessment and grading based on online classes?

14. Can you mention few barriers in online-based education?

15. What, in your opinion, is the best thing about Online based education?

16. Do online classes create any mental stress or anxiety in you?

17. Do you think real learning takes place in online platform?

18. Do you think that online education is suitable for tertiary level of education in Bangladesh?

19. Is the value of traditional pen and paper learning in a classroom environment compromised with the advent of Online learning and Teaching?

20. What platform do you prefer for your future education?

21. What are your suggestions or forethought regarding online education at your university or in broader educational domain in Bangladesh?

22. Do you think Bangladesh Education system needs a thorough change to enter (if needed) into a complete new domain of online based education?