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AIUB Journal of Business and Economics

Volume: 17 Issue Number: 2 ISSN (Online): 2706-7076

December 2020

Citation

Sultana Y., Bhattacharjee S., Shaown J. I., Challenges and Prospects of Online Learning during Covid-19: A Study on the Student Perspective (2021) *AIUB Journal of Business and Economics*, 17 (2), 151-170.



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AIUB Journal of Business and Economics

Volume 17 Issue 2

ISSN (PRINT) 1683-8742

ISSN (ONLINE) 2706-7076

December 2020 pp. 151-170

Challenges and Prospects of Online Learning during Covid-19: A Study on the Student Perspective

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Challenges and Prospects of Online Learning during Covid-19: A Study on the Student Perspective

Abstract

The shift to online learning is a really commendable step taken in Bangladesh in order to ensure that education remains running and accessible at a mass level. Most of the higher education providers in our country have taken numerous steps to provide online education. However, the current mixed method study – done through a combination of surveys and semi-structured interviews – suggests that there are numerous challenges in the online learning system right at this moment. Internet connectivity, technological difficulties, time-consuming adaptation to the new learning system, and assessment related aspects are the major reported challenges. While these challenges were reported, the respondents also mentioned positive aspects of online learning which includes accessibility to lecture content as per the time convenience of the students which provides them the opportunity to prepare themselves better. Also, the online system provides both the faculties and the students the opportunity to better enrich themselves with relevant content and subject matter from a wide variety of sources. In order to be able to integrate an online learning system or e-learning system in our regular provision of education in the post-Covid times as well, we need to address these challenges, keeping the students' perspective in mind. Just like the renowned education-providers all over the world, education providers in our country can also slowly shift to a hybrid education model which facilitates both online and offline features of learning.

Keywords: Challenges, Covid-19, Education, Hybrid Model, Online, Opportunities

1. Introduction

The emergence of coronavirus has impacted numerous aspects of our life in many ways. Developed and developing economies across the world are bearing the brunt of this deadly virus for almost a year now; the education sector is no different. In the higher education sector, many universities are being shut down or are being merged with each other because of lower enrollment of students. Besides the institutions, students are also being affected in numerous ways. According to a survey done by Quacquarelli Symonds (QS) (2020), a significant portion of the students have responded that coronavirus has affected their regular flow of study plans. The situation is even worse in the case of international students who are not being able to choose their desired destination because of either health safety reasons or imposed travel ban in their countries. To ensure continuous education, numerous universities and higher education providers have embraced online mode of delivery in their education system. Although this is a commendable step, there are numerous challenges with regards to online education both from the academic perspective as well as the student perspective. Implementing such a system within such a short period of time requires time and effort. While studies are being done to identify the challenges and opportunities of various modes of education in the developed economies, such studies are still limited in the developing countries. To identify these challenges and opportunities, the current study aims to highlight the students' perspective in relation to the recently implemented online – or in some cases a combination of online and offline – education system.

2. Literature Review

2.1. Covid-19: The Unprecedented Effects of a Deadly Virus

Covid-19, a disease believed to have originated from a seafood market in Wuhan, China in December last year, has already affected more than 200 countries across the globe. According to John Hopkins University's Covid-19 dashboard, the number of confirmed cases, as of January 23, 2021, is

more than 98 million while the number of deaths stands at 2, 106, 630¹. Besides these death tolls, Covid-19 has also had a major impact on the economy: businesses are being shut down, and unemployment numbers are reaching new heights. Along with other countries, Bangladesh is having to deal with myriads of economic uncertainties due to the Covid-19 epidemic. Even though the ongoing general holiday which has started on March 26, 2020, was a commendable step by the government to ensure social distancing in an attempt to flatten the curve, due to the temporary halt in economic activities, many businesses are in existential crisis. To ensure survival, many companies are laying off their employees. According to a study done by LightCastle Partners on the low- and lower-middle-income communities in the urban areas, a significant portion of the households has experienced a drop in their income while some have lost their jobs. The case is even worse for those who work in the informal sector: freelance and public transport workers have seen a major drop in their earnings.

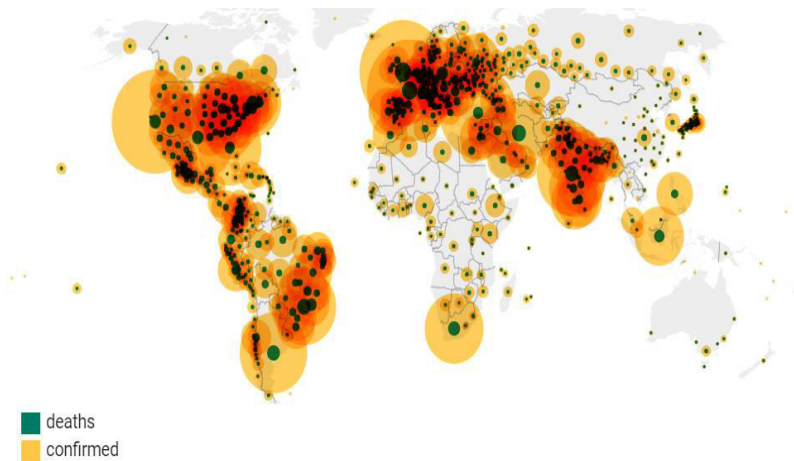


Figure 1: COVID-19 confirmed cases and deaths (as of January 23, 2021)

Source: Adapted by Business Insider taking data from Johns Hopkins CSSE

Along with the economy and the business sector, the education sector worldwide is facing numerous challenges as well. In an effort to identify the

¹ The data needs to be updated the day before publishing. Data can be found here: <https://coronavirus.jhu.edu/>
Similarly Figure 1 and 2 need updating before publishing. The figures can be found at <https://www.businessinsider.com/coronavirus-in-charts-covid-19-symptoms-spread-deaths-warnings-2020-2#this-chart-shows-the-rate-at-which-the-coronavirus-case-total-has-shot-up-worldwide-2>

current effects of Covid-19 on the education sector, the current study focuses on the challenges and opportunities of the education sector, from a student perspective.

2.2. Covid 19 and the Education Sector

Along with businesses, the education sector is being severely affected by Covid 19. Higher education providers worldwide are facing numerous challenges – short term and long term – in providing their services: budget cuts, demand for reimbursements, falling student registrations, and operational short-comings are to name a few. Universities of both the developed and developing economies are facing the challenges of shrinking budget. To tackle these budgetary challenges, many education providers are announcing employee furloughs and budget cuts (The Daily Wildcat, 2020). Many executives have taken pay cuts, university endowment funds are being shrunk, and many university infrastructural projects are at a halt. To make things worse, student enrollments are also falling, especially in the case of international students (The New York Times, 2020); because of the health risks of international travelling, many of the international students are not accepting their offers. The financial impact of this is quite devastating for the universities, especially in the case of undergraduate students: a lost enrollment now means a loss in revenue for the next four years – the length of the program – which demonstrates the long-term effect of this deadly virus. While the rising cost of graduate education, skyrocketing levels of student debt, and falling youth population in some countries have already been taking a toll on the revenue stream, this novel virus adds further causes of tension.

Besides the above mentioned challenges, the reopening of universities for on-campus education is also a major cause of concern. Given the health risks involved, many universities have shifted their class teachings online whereas others are going for a blended model of online and offline education. In this hybrid model, offline face-to-face education is supplemented with online education to reduce the risk of social contact during the pandemic (Triyason et al., 2020). In this model, certain activities are conducted online in synchronous and asynchronous manner whereas

other educational activities (such as laboratory works, seminars) are conducted offline (Gnaur et al., 2020). Research is also being done on the feasibility of various education provider models such as augmented immersive residential model, hybrid model, or a full throttle online model; many are analyzing the viability of these options in the post-pandemic era as well (Govindarajan and Srivastava, 2020).

It is to mention here that Covid-19 has to some extent accelerated the adoption of MOOCs (massive online open courses) that started its journey in 2003. Since its inception, online learning is being delivered by numerous technological platforms. From a technological perspective, platforms such as UkeU in the UK and Alison in Australia are the early providers of online education (Ch and Popuri, 2013). Since then, Coursera, Udemy, and edX have also joined the journey. It is to note here that adoption of such platforms has increased due to Covid 19. Even in Bangladesh, universities have adopted platforms such as these to deliver online education.

2.3. Steps Taken to Address Covid-19

The spread of the virus has transformed the education system in many countries. Many countries across the world are using educational technology to facilitate remote learning practices (World Bank, 2020). Along with other countries, the Bangladesh Government has also taken major steps in order to ensure access to education at a mass level (ibid). In order to ensure accessibility, the Government has started broadcasting educational lessons for the students of Class six to ten on national television; the program is called “My School at My Home” which is telecast throughout the day on a regular basis. Given the poor internet access throughout the country, the broadcast of educational content on national television is a commendable step taken by the Government. Besides telecasting the content, the program is being made available via YouTube channel as well in order to ensure that if someone misses the live telecast, they have access to the recorded content on-demand. To further strengthen these efforts, the Government is working with UNICEF to ensure remote learning through other media as well such as radio and mobile phone. Besides, UNICEF is extending their support in this

regard by providing parents and other personnel by disseminating necessary information on effective teaching and learning techniques at home.

2.4. Online Learning or E-learning: Challenges

In today's world of digitization where the majority of the world is connected, it is high time that we utilized the facilities and blessings of online learning in providing education. Online learning is the facilitation of remote learning – synchronous and asynchronous – through the use of internet access using electronic devices such as cell phones and laptops (Dhawan, 2020). In synchronous learning, teaching and learning takes place at the same time (live lectures) whereas in the asynchronous mode, the learner can access the educational lectures at a later time as per their convenience (through recorded lectures). Just like other education providers in the whole world, Bangladesh, since University closure from mid-March, has launched online education in different institutions to various extent. While the launch of online education is a commendable step to ensure continuous education, there are quite a number of challenges in this online delivery.

Although online and hybrid education is expected to become a mainstream form of education in many countries across the world, it has faced many challenges since its adoption in the 2000s; the quality and quantity of online education depends on ICT capacity, technological diffusion, the degree of digital divide, and other factors (Palvia et al, 2018). Online education was first adopted – although with a lukewarm rate of adoption – in the USA in 1998. However, since its inception, currently the rate of adoption of online education is increasing across the globe. The reasons for such increasing adoptions are increase in university reach, addressing the shortfall in faculty members, reducing the need for overcrowded classrooms and resultant infrastructural costs, facilitation of self-paced learning, and introduction of a non-biased evaluation system (Popovich and Neel, 2005). However, since its adoption in the early 2000s, numerous challenges came in the way: minimal understanding of online pedagogy, insufficient administrative support, lack of marketing reach for a new style of education are to name a few (Kentnor, 2015). Student engagement in online learning was also not on

the rise initially because of the perceived low quality of online education, employer bias against this new form of education, lack of appropriate degrees and course contents offered, and reduced face-to-face interaction between the instructor and the students. Engagement was also affected due to the experience of isolation from other students, concerns about adapting with the technological aspects of this form of learning. Students were reported to regret that online education does not cover the required depth in some courses the way it is done in traditional courses. However, in the recent era of online education, engagement has increased in countries such as India, New Zealand, Australia, and South Africa (Palvia et al, 2018). Growing penetration of the internet and low cost alternatives to traditional education are some of the reasons behind such adoption and engagement in online or hybrid forms of learning.

Challenges in online education exist in the Covid era as well. The first issue with regard to the challenges in online education is the digital divide or inequality among students. Quality Internet connectivity is a major problem in many areas of Bangladesh (Rahman, 2020); on top of that, for students who live outside Dhaka, internet access might be very difficult to ensure continuous online education. Additionally, many students may not have the necessary equipment such as computer, laptop, or smartphone to attend online classes (Daily Star, 2020). Thus, the adoption of online education further widens the digital divide among students from different socioeconomic backgrounds. Another major problem with regards to online education is the infrastructural unpreparedness in terms of technology adoption in some of the education-provider institutions in our country. Some do not have the necessary equipment to record or provide online education; this infrastructural lacking ultimately translates into further difficulties for the students in adapting with online education.

In order to uncover further challenges, along with the positive aspects which can further be translated into opportunities in the post-Covid world, the researchers are carrying out the current study following a mixed method approach.

As a response to the effects of Covid-19, many education providers have shifted to some form of online learning. While online learning is being adopted as a solution to the disruption of education, it's worth asking the question – how do students actually feel about online education? Along with the benefits, the perceived challenges of online education need to be focused on as well. Keeping this issue in mind, the current research identifies the problem which states the limited focus on the views held by students in Bangladesh with regards to challenges in online learning; at the same time, this research also focuses on the opportunities that can be grabbed on to continue – at least in a hybrid model – online education in the post-Covid world.

2.5. Research Question

What are the challenges and opportunities – from a student perspective – of online learning during Covid-19 in Bangladesh?

Specific Objectives

The specific objectives of the study are:

1. To identify the numerous challenges of online education faced by students
2. To find out the opportunities of online education in the post crisis new normal period

3. Research Methodology

Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized and indicated by a reference. If quoting directly from a previously published method, use quotation marks and cite the source. Any modifications to existing methods should also be described.

3.1. Research Philosophy

The researchers believe in a pragmatist philosophical standpoint for this study. Pragmatism believes in identifying a practical solution to a problem rather than focusing on the way of identifying the solution (Creswell and Creswell, 2017); end is more important than the means here. In this research, the researchers are more concerned with finding out the answer to the research question and using all approaches (qualitative and quantitative) to understand the problem. The concern is more about having an understanding and exploring the solution to the problem than about the methods used (Creswell and Creswell, 2017).

3.2. Data Collection

For data collection purposes, the researchers followed a mixed method study here; both qualitative and quantitative methods were used. For both the purposes, the researchers relied on convenience sampling; because of the Covid pandemic that was going on during the time of this study, it was difficult to collect responses from probable respondents – due to the resultant difficulty in collecting data, the researchers relied on convenience sampling.

For quantitative data collection method, the researchers sent out online surveys to university-going students. The survey was developed based on the questionnaires developed by Demuyakor (2020) and Adnan and Anwar (2020) in measuring student perceptions and perspectives of online learning. The survey link was posted in online learning communities (i.e. LMS (Learning Management System), Moodle) and Facebook groups of the students of 4 universities. The respondents self-selected themselves in responding to the questionnaire. Response was collected from students enrolled in different disciplines of natural and social sciences. In total, 692 responses were received among which 518 responses could be considered for data analysis purposes (the rest of the questionnaires were screened out because of incomplete responses)

After collecting data from the online surveys, 20 semi-structured interviews were conducted with selected university students; this number of

respondents satisfies the minimum number of semi structured interviews – 5 to 25 – advised by Bell, Bryman and Harley (2018). The respondents were contacted by the researchers themselves. The average length of the interviews was close to 27 minutes. In the interviews, the respondents were asked about their experience of the online learning experience to date. In addition to these methods, student-run Facebook group communications (posts, comments) were also analyzed to measure the sentiment of the students towards online learning.

3.3. Data Analysis

The study followed different data analysis methods for qualitative and quantitative data. For quantitative data analysis, first the study presents descriptive data analysis findings. For qualitative data analysis, the researchers analyzed the collected data using template analysis (King, Cassell and Symon, 2004; King, 2012). The sequential classification of the identified interview data themes in first order, second order and overarching themes was able to extract the respondent experiences in a methodical manner. It is to mention that along with the interview data, the qualitative data collected from various online platforms was also used as an input of the template analysis format.

Finally, the data collected from these different sources – interview, online community discussions, and surveys – was triangulated.

4. Results and Discussions

4.1. Descriptive Findings

Among the 598 surveyed students, 58% were male whereas the rest were female. About 2/3 of the students belonged to the age group of 20-24 years whereas the rest belonged to the group of 24-32 years old. Moreover, during the time of the survey, 29% of the respondents were living outside Dhaka. It is also to mention that more than 40% of the students experienced some sort of decrease in their family income during COVID-19.

As per the survey results, the major challenges that appeared in the online

learning mechanism are growing digital divide, internet connectivity, technological difficulties, issues in adapting with the new education system, and assessment related aspects. Among the students, more than 65% reported internet connectivity as a major problem in online education. Besides, more than 70% of the respondents reported some form of technological difficulties with regards to online education. These technological difficulties included lag in the education providing platform (i.e. LMS), lack of bandwidth, difference in the layout of the platform across different devices, and problems in downloading as well as uploading content to the platforms. The reporting of internet connectivity and technology related problems varied depending on the geographic location of the respondents.

Along with technological and logistical problems, another major problem reported by more than 62% of the students is related to adapting with the new system. As online education is a relatively newly implemented system in Bangladesh, many of the students were facing difficulties in learning to access the various features of the platforms. The adaptation was reported to be even more difficult at a time when many students were suffering from health-related problems, both physical and mental. Moreover, many of the students have taken family responsibilities along with their regular studies which they did not have to do during normal times.

Assessment related issues is also another major challenge reported by more than 42% of the students. Many of the assessment systems being followed in some courses are completely different from face-to-face assessments; so, some of the students are facing difficulties in understanding the specific assessment criteria. It is to mention that with regards to assessment, some of the students are dissatisfied with the fact that in case of take-home exams and assignments, non-deserving students now have the ability to secure higher marks through the use of unfair means such as cheating and plagiarizing.

Along with these challenges many of the students also reported some positive aspects of online learning. 77% of the students reported that online education provides them the opportunity to access the lectures at a later

time, given the lectures are recorded and uploaded for later access. Along the same line another benefit of recordings being available is that the students can go over the lectures as many times as they want, prepare questions about the concepts that they could not understand, and finally come back to the next class to ask those questions to faculty members. While this is a positive benefit reported by many of the students, when asked whether the students would prefer full online education in the future, more than 82% of the students did not prefer full online education. During normal times all of them wanted to come back to the university, mostly because of their face to face interaction with the faculty members and their peers in class. Of these students, 22% preferred some form of hybrid education which facilitates both online and offline form of delivery.

4.2. Detail Interview Accounts: Challenges in Online Education

The challenges in online education are explained below from numerous aspects:

4.2.1. Technological Aspects

According to the interview findings – and survey results – access to quality internet is one of the major issues with regards to online education. Many of the students do not have proper internet connection. This problem is a major concern for most of the students who are living outside of Dhaka; even though they could manage internet connection for uploading and downloading educational content, uninterrupted connection was not possible for many. This is a major concern in the case of synchronous learning where live lectures are provided to the students.

Along with internet connectivity issues, students also reported other logistical aspects with regards to technology. First, due to the lag and improper functioning of few online learning systems, many students face difficulties in accessing content and submitting their assignments on time, especially, when the allotted time for the exam is limited. This came out as a major concern for many which ultimately caused further difficulties for both the students and the faculty members as both of them had to arrange for makeup exams or assignments afterwards. Another technological

shortcoming of the system was the variation in the layout of the platform on different devices such as mobile phone and laptop. Specially some of the learning systems were not properly optimized for mobile phone usage. Many of the students preferred to use or access course contents from their mobile phone rather than from laptop or PC; however, lack of optimization for mobile devices posed a challenge for many students.

With regards to the technological aspects, another major concern was the growing digital divide as mentioned earlier. Many of the students' families faced some sort of loss in earning power during this COVID-19 times. Some of them mentioned their inability to manage necessary device for accessing course content; few reported not having necessary smartphone or laptop or personal computer to access the content. This was a crucial issue specially for those who had siblings: even though they had a laptop or a PC in their homes, they had to use the same device for educational purposes of all the siblings in the house. This caused problems in submitting assignments on time or attending exams because it was reported that on the same day often all the students in the family often had assignment deadlines to meet or exams to attend.

4.2.2. Difficulty in Adaptation

Besides the technological difficulties, adaptation to the new system was another major source of concern for most of the students. The online system is new in Bangladesh from two perspectives: number one is obviously the system itself. Getting used to the whole technological system of accessing the different features of all the different platforms within such a short time is difficult for the students. Without proper hands-on training, students reported some sort of difficulty in accessing the contents. The second aspect of adaptability comes from the design and content of the curriculum in online learning. Many of the courses are now focusing on the qualitative aspect of the learning of the students. Usually in face to face learning, students used to go home, memorize all the concepts, and then write them on the scripts in the classroom. However, in online learning many of the exams are assignment-based and the marking criteria has also started focusing on the qualitative learning aspect of the writing; even many courses

are encouraging students not to rely on one single book, rather combine different articles, books, and internet sources when structuring and preparing their answer. Obviously, this is a good step in ensuring quality education; however, the students are not used to this sort of learning and education in our country, and that's why there are facing significant challenges in this regard.

While adapting to both the technological and curriculum-design related aspects requires time and effort from the student side, the current situation does not allow for the students to do so. Difficulty arises from mainly three sources: First, many students have taken on family responsibilities in their own home. When they used to have helping-hands and house-help in their home during regular times, many do not have such help right now, either for health and safety reasons, or even for financial reasons. So, the family responsibilities are being divided among the family members. Second, some families of the students are suffering from Covid-19; there are families where the parents, the students themselves or the whole family have fallen victims to COVID-19. In such cases, it is really difficult for them to carry out their studies. Even there were reported cases where the students' family members had just passed away after suffering from COVID-19 for a long time. For such families, carrying out studies is really difficult during this time, let alone adaptation. Along with the deterioration in physical health, mental health of the students is also taking a toll during this time; just the 24/7 risk of being affected by COVID 19 often takes a toll not only on the students but also on the family members.

4.2.3. Lack of Engagement

Lack of engagement is another negative aspect raised by the students in online learning. While in face to face interaction, the students get to sit with their friends and learn in an interactive class environment, this feature is missing in online education. It is even a bigger problem in case of asynchronous learning where lectures are being pre-recorded and uploaded before the class starts. So, students have to just go through the lecture which is sort of a one-way communication. After doing so, if they have any questions then they can come to the class and clarify their confusion.

However, in this method interaction among the students and the faculty members is at a bare minimum. The absence of face-to-face class is even a bigger problem in the case of students of natural sciences. A major aspect of their learning comes from practical lab-based activities. But, in online learning this feature is completely missing. So, many of them feel that even though they are theoretically being sound, without the lab component in their study, a majority portion of their learning is missing.

4.2.4. Online Assessment

Assignment-based exam is comparatively a newer concept in Bangladesh. While submitting assignments, students are being forbidden to directly copy and paste from the book; rather they are told to avoid plagiarism and paraphrase whatever they have learned. But, again, this style of learning is completely new to many. Second concern with regards to assessment is the growing level of distrust among the faculty members and the students. Obviously in online learning there is a broader scope of cheating or unfair means for the students. On the one hand, some students are resorting to unfair means to secure a better grade in the exam whereas on the other hand faculty members are trying to come up with numerous strategies in an effort to minimize such scopes of unfair means. As a result, there is a growing and widening gap in the trust between both the parties. This is going to be harmful in the future in the pursuit of true education. Another problem in the same line is that due to the possibility of unfair means, students who do not resort to any sort of cheating are often not being able to secure good marks compared to that of others. If any solution is not found very soon in this regard, many of the students relying on honest means only may become frustrated and ultimately lose confidence in themselves and their integrity.

4.3. Opportunities of Online Learning: Capitalizing on the Positive Aspects

Even though numerous challenges were reported, both in the interviews and surveys, quite a number of positive aspects came up as well. The most important aspect was the resultant convenience in accessing the online materials after the lecture was delivered; in face-to-face class this facility is not available. In an online lecture system, because of the recordings,

students get the ability to go through the concepts at a later point in time as many times as they need. This is especially beneficial during this unprecedented time when it is, naturally, not possible for everyone to attend classes on a given schedule: many students may have medical emergencies or other family related issues to handle. In some of the interviews, the new experience of online learning was also mentioned in a positive note; because of the shift to online learning, students are having a positive perception about their institutions. They perceive that such a shift to online education was necessary in order to ensure quality education. In this regard, one of the students mentioned:

“From the very beginning of my studies, I have always planned to go abroad for higher studies. When I'm looking for universities abroad, I always find out that universities abroad are also providing online education. Some of the contents of these universities are really good. Now that I finally see that my university is also providing online education, it really feels good... it seems that I am availing quality education while sitting home. I believe this education system will better prepare me in my pursuit of having higher education abroad”

Building on this positive note, universities or higher education providers in our country can start building a robust online platform for providing education in the post-Covid era. However, rather than relying on 100% online education, a blended system can be designed. Taking advantage of e-learning, the experience of hybrid education can enhance the true learning of the students. In fact, in many interview accounts, students mentioned their preference for a hybrid education system: here, online portion of the education will provide them the opportunity to learn from a broader curriculum; this online education can be supplemented by face-to-face learning which will facilitate further interaction, and provide the students the opportunity to learn through hands-on experience.

5. Conclusions

The study findings suggest that there are numerous challenges in the online

learning system at the current moment: internet connectivity, technological difficulties, time-consuming adaptation to the new learning system, and assessment related aspects are the major ones reported by the students. While these challenges were reported, the respondents also mentioned a few positive aspects of online learning which includes accessibility to lecture content as per the convenience of the students which provides them the opportunity to prepare themselves better. Also, the online system provides both the faculties and the students the opportunity to better enrich themselves with relevant content and subject matter from a wide variety of sources. The findings of this study can help the higher education provider authorities as well as the government in coming up with education policies which will assist in building up a robust hybrid education system. In this regard, policies can be developed at the institutional level and the country level. At the institutional level, policies can be designed keeping multiple stakeholder perspectives in mind whereas at the country level infrastructural aspects can be strengthened further to facilitate learning. Moreover, national level policies to design online pedagogy and develop necessary expertise through mass training is needed. However, before designing such robust policies, further studies need to be done on a broader scale. Similar studies can be done on a national scale to include perspectives of students and educators from different geographical locations. Moreover, administrative personnel surveys are also required. A study can also be done to check the feasibility of implementing already developed online learning pedagogies in Bangladesh; doing such a research will let authorities decide whether any modification is needed to the pedagogies to adapt with the local context of the country. If we intend to upgrade our education system to the same level of that of the top-notch institutions of Asia, integration of digital learning is a must; in this pursuit of digitization, listening to the students' perspectives is also a crucial aspect to consider. Only then, a wholesome and sustainable learning system can be designed.

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