Hybrid Instruction: Post COVID-19 Solution for Higher Education in Bangladesh

Ikbal Ahmed[1]| Md Eunus Mia Bhuiyan[2]| Md Shafiqul Alam Helal[3] | Nayan Banik[4]

[1]Dept. of CSE, CCN University of Science & Technology, Cumilla, Bangladesh
[2]Dept. of English,CCN University of Science & Technology, Cumilla, Bangladesh
[3]Principal, IbneTaimiya School & College, Cumilla, Bangladesh
[4]Dept. of CSE, Comilla University, Cumilla, Bangladesh

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ABSTRACT

The recent outbreak of COVID-19 has tremendously affected every aspect of global structures with its fast and lethal reach. Originating from Wuhan, a Chinese city, this highly infectious virus has forced to impose nationwide closures in many countries impacting onsite educational systems to shut down. Considering the safety of students and following other infected countries, the Bangladesh government has closed all the educational institutions until further notice. Although online teaching-learning is promoted for educators and students to streamline their educational activities from home, it has several drawbacks from different perspectives. Post pandemic scenarios in higher-level education system pose some questions and doubts which requires scholarly works for a thorough investigation. To analyze these scenarios and describe the trends towards effective teaching-learning, in this research work, we have proposed a model by interviewing students from the university level. Our proposed Model provides some rationale and guidelines for its post-pandemic implementation in the higher-level education system in Bangladesh.

KEYWORDS: *Hybrid Instruction, Post COVID, Higher Education, Bangladesh*

INTRODUCTION

In 2019, Corona Virus Disease (COVID-19) emerged from the Chinese city Wuhan and was declared as a global pandemic for its highly infectious nature (World Health Organization, 2020). This virus can be transferred from one person to another via respiratory droplets and other organs like hands, nose, and mouth. If any COVID-19 patient comes within 1(one) meter closure to another person, the virus can be transmitted efficiently to that person via droplets and sneezing and coughing.

The first COVID-19 case was detected in Bangladesh on March 08, 2020, and the Bangladesh government declared the national lockdown after 17 days on March 26, 2020. In contrast to many other nations, including India and Pakistan, this lockdown was called well ahead in the hope of narrowing down the spread of infection.Even before the lockdown, Dhaka and other parts of the country had already shut down the majority of schools , colleges, markets, cinema halls, etc. Later, the lockdown was extended until 26 April, and the free movement of citizens, cars, etc. was restricted by the government and people

were advised to stay at home. The citizens were allowed to step out only in emergencies. However, educational institutions remain closed until today. Undeniably, the direct and most immediate impact of COVID-19 is the loss of learning opportunities in the education sector. In the hope of flattening the curve of infected cases and restricting the exponential growth of Bangladeshi patients, all these steps have been taken.

It is to be noted here that according to the University Grants Commission (UGC) sources, the number of students in higher education in the country is nearly 4.1 million. Of them, 44 public universities have about 0.3 million students and the remaining 0.4 million students in 103 private universities [1]. A considerable number of students, about 3.4 million, are studying higher-level education in different colleges under National University. The effect of post-pandemic education for these students is essential to explore.

Online Learning

Traditional methods of learning have shifted into a more modern form utilizing the unforeseen advancements in technological developments. Online teaching and learning is one such revolution where educational institutions are effectively employing Information Technologies (IT) to ensure access to resources, enhance instructional quality, and reduce the expenditure of traditional classes [1].

Online teaching-learning can be based on either asynchronous or synchronous communication wherein asynchronous system tools like e-mail, discussion boards, learning newsgroups are used. For synchronous system webcasting, live chat and audio/video technologies are used for real-time class [2].

Statistics show that during the pandemic, E-Learning has seen massive popularity among people from diverse backgrounds. According to a survey conducted by Payoneer [3], more than 80% of registrations increased to their online educational program at the start of the pandemic. Althoughonline education was growing for the past few years, this imposed social distancing and mandatory quarantine situation drive millions of people to adopt the trend of E-Learning. The survey also reports that during the height of the outbreak, Coursera saw dramatic growth with more than 25 million registrations since mid-March, a 520 percent increase from the same period last year,

and Udemy had a 425 percent increase in student registrations and a 55 percent increase in instructors' course formation. Categories with the highest surge in new courses include office productivity (159% increase), health & fitness (84%), IT & software (77%), and personal development (61%). [8]

Hybrid Instruction

A hybrid approach to course delivery combines face-to-face classroom instruction with online activities. This approach reduces the amount of seat time in a traditional face-to-face course and moves more of the course delivery online. Most course activities are performed online, but a limited number of events are required for scheduled in-person classroom or other onsite group activities. Online delivery eliminates all but a few face-to-face sessions that are needed.Although this course category may generally be referred to as an "online" course, the distinction is significant because the incorporation of face-to-face work imposes certain geographical restrictions on the access of students to the course. The institution is responsible for setting the threshold for online activity that is needed. Hybrid courses reduce by at least 25% the number of required classroom sessions, although some classroom sessions are required.[9] Less than 20% of online instruction cannot be conducted online.

Percentage of online instruction	Hybrid classification
80% and above	H1
60% - 79%	H2
40% - 59%	H3
20% - 40%	H4

Table-01: Hybrid instruction Classification.

BACKGROUND OF THE STUDY

COVID-19 crisis offers a unique chance to imagine more equitable societies and education systems. It is also a call to action, to take meaningful action to bring about that desired future [7]. With modern information technology, the "online" and "offline" English teaching can be organically combined. Students can conduct classroom display under the guidance of teachers or group cooperation through the "online" self-study before class, and carry out learning discussion in the "offline" class, to promote students' ability of independent thinking and innovative learning [3].

Having statistically measured the data, the researchers found that students who were taught by the blended method obtained significantly better results than students taught by the conventional method. The results of this study show that the use of innovative approaches while keeping good aspects of pre-existing approaches has a positive effect on the achievement of students. [2].

It is not the same as condemning all types of online learning to stress the risk of normalizing emergency e-learning. Indeed, one could argue that e-Learning provides a different kind of emancipation. The extreme portability of e-learning, assisted by a digital computer, will increase access to education in rural communities. For individuals who cannot attend a traditional full-time face-to-face school due to personal or financial circumstances, the flexibility of asynchronous E-Learning may provide more comprehensive access [4].Furthermore, even within traditional higher education institutions, hybrid or blended forms may help improve the quality of face-to-face teaching by moving content delivery online and focusing in-person sessions on active learning (e.g., Bowen, 2012).

The asynchronous practice provides flexibility to teachers in the preparation of learning materials and helps students to juggle home and research requirements. Asynchronous learning in digital formats performs best. Teachers do not need to deliver content at a set time; for on-demand access, it can be posted online, and students can connect with it to accommodate their schedules using wikis, blogs, and e-mail.Teachers should regularly review the involvement of students and make online appointments for students with special needs or questions. Creating an asynchronous interactive classroom provides more space for teachers and students to breathe.[5].

The post-COVID19 world offers a rare opportunity to reform the education sector for generations to come. It would be imprudent to miss that opportunity [6].

METHODOLOGY

Research Design

In this paper, we investigated the quantitative research approach. This research compared the increasing rate of the technology accessibility of the higher education students between April 2020 and August 2020. Thus, there were two different times in the same group of the respondents in this research whose scores were compared to determine the use of the technology and interest in continuing the educational activities online. The students submitted the questionnaire at the beginning of the closure of the educational institutes, and other data were collected after five months from those students for comparison. The data were then statistically calculated to determine the effects of online and traditional methods on the students' activities.

Population and Sample

The population of this research is the higher-level students of Cumilla, Bangladesh. The total number of samples that we have collected is 100 students.

Data Collecting Instruments

The data is collected using Google Forms, which involved yes/no questions. The questionnaire is sent to the respondents for two times. The first time, data is collected in April 2020 and the second time in August 2020 from the same respondents. When all scores have been accomplished, the final scores between the two surveys are prepared.

Data Analysis

The data is statistically analyzed to find out the effect of Online classes to continue the post-COVID period.

TEACHING LEARNING MODEL

There are many subjects in higher education. All the subjects are independent in nature. The teaching and learning process of these subjects may not be similar. However, Figure-01 shows how all the subjects can be taught on the same platform during a crisis like COVID-19.

Whenever we input the course code and course title to the model, it will check whether their course has a lab or not. If it is 'Yes,' then it will be related to the computer. If it is 'No,' then it will be connected with offline.The courses that are related to computers and the Internet can be run online. Students can easily get the related lesson staying at home. So, universities can continue their lectures online. However, the subjects which are not related to computers and the Internet can be taught offline.
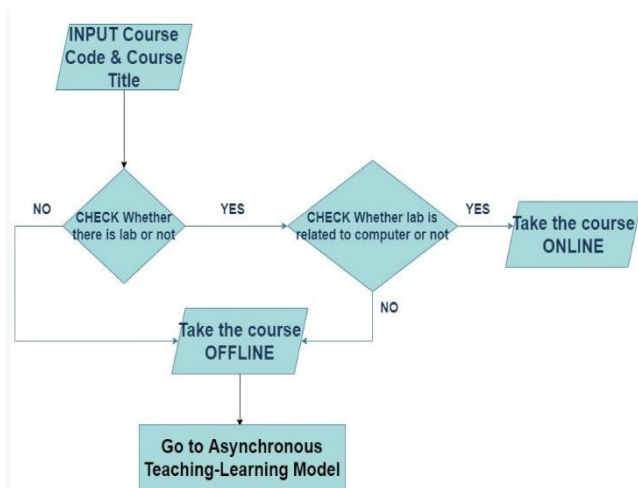
Figure-01: The Hybrid Teaching-Learning Model

For instance, if any class has five subjects in a day, and if two classes can be conducted online, then the remaining three classes can be run offline. Still, there is a chance of mass gathering. That is why the authority can be strategic. Offline classes can be reduced and rescheduled to minimize mass gatherings. Thus, classes can be continued to make up the loss as far as possible.

Asynchronous Teaching-Learning Model

It refers to any learning activity where not all responses and interactions happen simultaneously, but when a participant chooses, they can be done (typically within a given time frame). Examples of asynchronous activities where learning happens between two or more people are engaging in an online forum or taking an online quiz. Examples include e-mail, online discussion forums, message boards, blogs, podcasts, etc.

Most of the course activities are carried out online, but some face-to-face teaching activities, such as seminars, discussions, laboratories or other in-person learning activities, are required.According to Table-01, In an online format, hybrid courses provide some portion of their content, reducing actual "seat time" in a physical classroom, often by as much as 50%, although this amount varies. For instance, the students and teacher could meet face-to-face once a week in a typical 2- or 3-day class.Instead of attending face-to-face classes, students will watch videos or participate in online learning events during the remaining days.
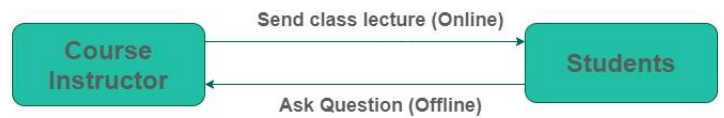

Figure-02: Asynchronous Teaching-Learning Model

An offline course instructor can also continue his lectures if he uses an online facility. He can send his specific lecture to the E-mail or Facebook messenger or groups of the learners. The learners can study the lecture. After that, only one group of students can go to the institution, maintaining social distance and rules of health where they can solve their problems from their respective teachers. Thus, the learners can be benefitted without going to the institute daily.

DATA ANALYSIS AND FINDINGS

The students also have to make an effort to adapt to what is new formulas for teaching and learning where they have been fortunate to find a continuity offer. The choice for continuity solutions that demand connectivity is spreading globally when the reality is one of low connectivity in households in low- and middle-income countries. Figure-03 shows the number of students connected to the INTERNET. The column data show that those who were not connected to the INTERNET in April, 2020were connected in August 2020. For a lockdown crisis, the Internet would be the most important thing for social communication and online classes. In April 2020, only 50 out of 100 students had access to the Internet. Nevertheless, it is now 70 in August 2020.
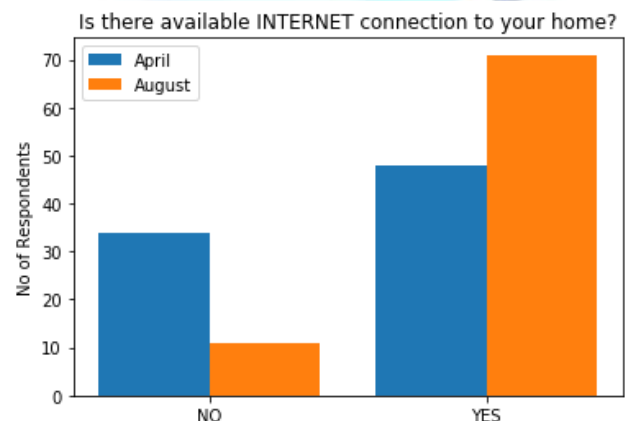

Figure-03: The increasing rate of Internet users.

Although we can assume that households with a higher education student are more likely to have connectivity, it would be risky to assume that all students, when they return home, have effective

connectivity. This is, without a doubt, an opportunity that higher educational institutes should take advantage of, focusing their efforts on technological solutions and content for use on digital devices.
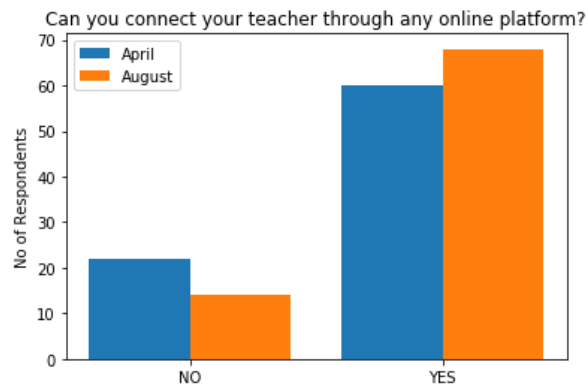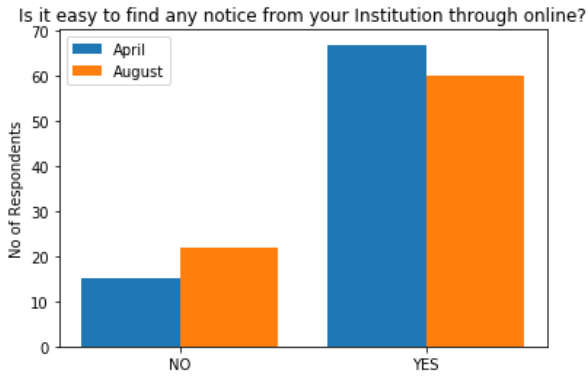

Figure-04: The number of students, whether they can connect their teachers and institution or not through an online platform.

The column data show that in Figure-04of April 2020, only a few students could connect with their teachers through online platforms. Actually, before the COVID-19 pandemic, both teachers and students were not used to using online. That is why, at the beginning of locked down, students could not connect with their teachers online. However, gradually, they are adopting the online platform. Therefore, in August 2020, the Data show that almost all students could connect with their teachers through an online platform. It shows that both the teachers and students are adopting the changing situation.
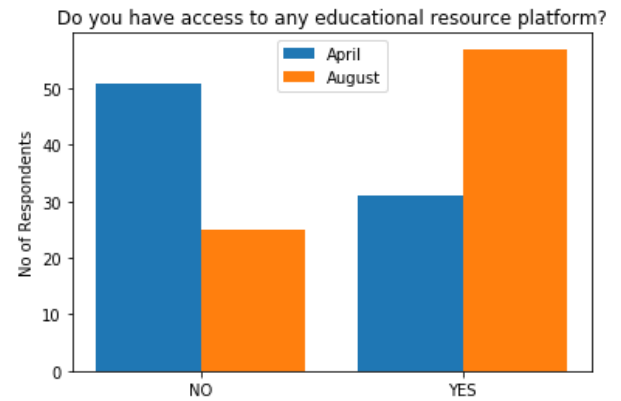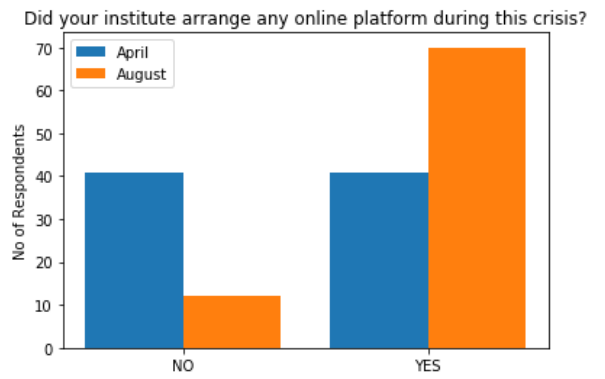

Figure-05: The number of responses that their institution arranges the online platform

The data shows that in Figure-05 of April 2020, maximum students had no educational resource platform, and only an insufficient number of students had an educational resource platform. Students and teachers have been habituated to formal teaching and learning method. However, due to COVID 19 pandemic, the teachers and students could not adopt the online learning process overnight. But the situation did not reacha standstill. Both teachers and students are adopting the changing situation. That is why, in August, the Data from the same respondents show that maximum students had an educational resource platform. In contrast, only a small number of students failed to get an online platform.

LIMITATION OF THE STUDY
Due to the large size of the population, every individual in the population could not be tested. Moreover, it is too expensive and time-consuming. That is why we collected data from the students of higher-level from Cumilla, Bangladesh. But this work can be extended to any region as well as the national level.

FUTURE WORK

The proposed model in this paper identifies only the computerized course to take the course online. But a non-computerized course also can be taken online. Although some conception has been pointed out here, future researchers can work on how all the subjects can be taught effectively online.

CONCLUSION

The post-COVID scenario for the higher education system in Bangladesh is a challenge as this is the very first encounter of such a pandemic and the education system is dependent on a face-to-face onsite communication approach. Sudden closure for sine die has made the teaching and learning process standstill,which is a massive loss for the education system. This loss can be effectively compensated by conducting classes online, as COVID-19 may not entirely disappear overnight. Therefore, hybrid instruction needs to be deployed so that teachers and students can maintain social distance and continue educational activities. This paper investigates the overall acceptance of such methods so that respected authority can make necessary provisions for course selection and an overall improvement in teaching-learning perspectives.

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