

Virtual Interactive Education: Bangladesh Perspectives

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Abstract

The worldwide pandemic COVID-19 has surged the largest breakage of education systems in history which affected 1.58 billion children and young learners, from pre-primary to higher education, in 200 countries (United Nations, 2020). Bangladesh has affected in many ways specially in education sectors. However the present study has conducted to identify the necessity of online education system for the primary and secondary level education in Bangladesh, to find out the problems of online education system for the primary and secondary level education in Bangladesh and to provide policy recommendations for online education system for the primary and secondary level education in Bangladesh. The study was conducted at Dhaka division and Khulna division in Bangladesh. The study followed combined method. The study was survey type. Purposive sampling method was used for the study. 156 students, 66 teachers and 30 other respondents were selected. So, total 252 respondents were selected for the study. Among the respondents, 61.90% were students, 26.20% were teachers who were mainly involved in online education. Data were collected from primary and secondary sources. Primary data were collected by using questionnaire by face to face interview with the respondents and secondary data were collected by reviewing secondary data sources. Computer Program Statistical Package for the Social Sciences (SPSS) was used for data analysis. From the result it was found that 71.0% respondents had Computer and 29.0% respondents had no computer, 66.70% respondents had internet connection at home and 33.30% respondents had no internet connection at home. From the result it was found that 57.5% respondents have no high speed internet connection at home but 42.50% respondents have high speed internet connection at home and 53.20% institutes have high speed internet connection but 46.80% but institutes have no high speed internet connection. 61.50% respondents replied that respondents stay far (5Km) from institute but 38.50% respondents replied that respondents don't stay far (5Km) from institute and 81.30% respondents replied that respondents get message in mobile or email from institute but 18.70% respondents replied that respondents don't get message in mobile or email from institute. 71.0% respondents replied that respondents have email address but 29.0% respondents replied that respondents have no email address. From the result it was found that 58.7% respondents replied that respondents want online study at home but 41.3% respondents replied that respondents don't want online study at home and 60.70% respondents like to take part interactive virtual class or meeting from home but 39.30% respondents don't like to take part interactive virtual class or meeting from home. From the result it was also found that 23.40% respondents don't feel easy to listen lecture or advice frequently by saved video data but 23.40% respondents feel easy to listen lecture or advice frequently by saved video data. From the result it was found that 68.70% respondents don't have uninterrupted power supply but 31.30% respondents have uninterrupted power supply. So government of the peoples republic of Bangladesh should provide more support for online classes, high speed internet should be provided, all educational institutions should have computer lab and facilities for online delivery classes.

Key words: Virtual class, Education, Internet, Computer, Laptop, Smartphone, Class room, Corona Virus, Pandemic.

INTRODUCTION

Bangladesh is battling severely against COVID-19's panic and pandemic. Economy, business, tourism and education are rigorously affected due to COVID-19. In the threat of corona virus epidemic, all the educational institutions are kept closed until further order by the government of Bangladesh. This shutdown happened as a preventive measure to combat against corona virus. Education sector of the country is facing the challenges of COVID-19. All educational institutions have been closed for more than half year. All students are worried about the uncertainty of class and exam starting. They are passing idle time in their home and anxious about lengthy of semester duration. Students in primary level are psychologically suffering from this accidental discontinuation of the learning from the school. Death toll and the number of infected people in corona virus in Bangladesh are geometrically increasing day by day. Students at any level are on the risk of infection by

COVID-19. However, the authority has recommended the teachers, students, guardians and all concerned to remain alert in dealing with COVID-19.

Online education gets its moment due to COVID-19 epidemic. Recently some public and private university teachers have started taking online classes and some faculties have announced the presentation of online assignments and homework. In addition to that some classes in primary and secondary level are going ahead by the teachers in TV. But question is that how much it is effective for the students. Online classes are not more effective than the direct classes in the classroom. Through online classes, teachers may not run the classes according to a specific plan. At university level, most of the students of public universities come from poor and middle class family; they may not have internet access due to their financial crisis. On the other hand, the scenery of private universities is different as most of the students there are from economically solvent families. So, they can avail internet access easily. Universities and other educational institutions of Bangladesh haven't faced such disruption in past also. Some countries, those belong to developed nations are running their e-learning systems for the students like USA, UK and China. But in Bangladesh it is quite difficult. The present study is conducted to justify whether online education in Bangladesh will be feasible or not.

The main condition of online education is to ensure the internet facility and access to online course content for all students. Teachers should make course content more accessible and vibrant for the student at the danger time of COVID-19. Amid the corona virus pandemic, we are facing first-time unexpected experience. We are unable to deliver lectures in the classrooms and assign the team works for students. That's why we have to adapt with uncertain circumstances and develop strategies to continue learning such as online education. If authority of educational institutions give the direction to start online teaching, many poor students won't have the ability to sustainably access them because they lack laptops & internet connection. Moreover, in rural and hill tracking areas modern infrastructure facilities are not available. It is a big challenge for online education in Bangladesh. However, if the ministry of education can give free internet wifi facilities to all the students; online learning may be effective in that case. Otherwise, some students will be deprived from online education and teaching. Though online education is a new platform of learning for both students and teachers, face to face interaction is very important for a successful class. Because, in a real classroom a teacher can easily control the whole class and monitor all the students at the same time.

The teacher can identify less attentive students in classroom and can attract them to the class in his own way by taking instant measures. Moreover, during the lecture time, students may have queries that can be easily answered shortly without any hamper in the flow of lecture in the real class. But due to the absence of real face-to-face communication between teacher and the students in online classes, it is very difficult to make online class successful. Interrupted supply of electricity is another vital obstacle for online education. Still now, people of remote area have zero access to electricity. Unstable power supply and poor power quality hamper online education. For example, a teacher may live in an area where electricity is available but students may live in a remote area where there is no electricity. So, it is a common challenge in Bangladesh.

RATIONALE OF THE STUDY

In Bangladesh, students are not used to such a online pattern of learning. Not only students but also many teachers of primary and secondary levels of education prefer the practice of traditional teaching methodology. In my observation, even many School and Colleges teachers are reluctant to use Power Point Presentation (PPT) and multimedia for teaching. In addition to above challenges, online education is expensive for the students compare to traditional learning. To do so, students need to have the access to the smart phone or laptop. They also require buying enough data. Smartphone technology may be more ubiquitous than the past, but the ability for poor students is yet to purchase a smart phone and achieve its potential outcome. So, it's another challenge of online education. Beside challenges, online education has many opportunities also; first opportunity is course contents rethinking to adapt online by the teachers. Teaching online is different from conventional practices, which suggest they need to think critically about what contents are included and excluded when giving online teaching. A teacher can easily redesign a course's outline to suit online teaching platforms that offers him an opportunity to update the teaching outcomes of his lectures and review whether all the contents arrange in a line or not. Secondly, online education is a platform where teachers do not need to learn exclusively through lectures. They can record videos of their lectures and making PPT, so students can access course content more than once. Moreover, they can form team to promote peer-to-peer learning in online. This opportunity also has noteworthy potential for expanding how students learn in a technology-driven world, both online and especially in the classroom.

COVID-19 pandemic is a global reality of the year 2020 that had ceased the educational activities during the beginning of the lock down phase worldwide. However most of the educational institutions all over the world

already broke the spell of the initial perception and inertia due to the pandemic and resumed their academic activities through online platforms. Although, most universities including world ranking institutions are struggling with finances, nevertheless, the effectiveness of online teaching and learning is gaining its prominence from the perspective of revitalizing the aggravating mental and spiritual states among the students along with the pandemic.

The students are all the more joining eagerly in online semesters with higher retention rates, finding the e-learning process as a greener option with learning and assessment progressing with reduced distractions and with less of a time investment as commuting is not a requirement. Furthermore, online platforms provide quite a flexible and all-inclusive opportunity with additional guidance and tutoring support from the instructors. Studies have already demonstrated that online mode of teaching will enable the universities to teach 15-18% additional students at the same cost. Bangladesh situation was no different than facing the reality and then moving on with it. Most of the Private Universities in Bangladesh operates in trimester schedule which offers lesser leeway and flexibility to transit over to a new mode of teaching or system in a wider timescale. Accordingly, being in midway between the semesters, most had to switch to online platform immediately for completing the semester and faced huge difficulty due to lack of experience in it. Before the broader perspective is discussed, it would be appropriate here to share the first-hand experiences gained by the authors directly from their workplace; Secondary and higher secondary education in Bangladesh, where most of the students are from middle class families and rural areas of Bangladesh. So only the way to teach students online govt. has to free the high speed internet cost for the schools.

OBJECTIVES OF THE STUDY

The objectives of the Study are as follows:

1. To identify the necessity of online education system for the primary and secondary level education in Bangladesh.
2. To find out the problems of online education system for the primary and secondary level education in Bangladesh.
3. To provide policy recommendations for online education system for the primary and secondary level education in Bangladesh.

METHODOLOGY OF THE STUDY

Research Methods

This study employed both quantitative and qualitative methods as a combined research approach (also called integrated approach). The study collected data and information from both primary and secondary sources in two phases. First, the study analyzed available literatures and documents to understand the theory and framework and study instruments regarding online education of primary and secondary students. Secondly, a *questionnaire survey* was employed to assess the probability of online interactive virtual education. The questionnaire was initially prepared in English and translated into local language, then will be retranslated to check consistency. Filled questionnaires were back-checked daily for their completeness by the researcher. Data were collected via face-to-face interview with the respondents of the study area. The study approach was participatory in nature which will be ensured meaningful participation of a range of stakeholders in the entire process of the study.

Research Design of the study

The choice of an appropriate research design is essential for a scientific study since it gives a framework of what the researcher do from setting the research question to the operational implications of the data analysis. A research design is 'the arrangements of conditions form collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure' (Selltiz 1965 cited in Aminuzzaman 1991, p.53). The study focused to evaluate the necessity of online education activities in Bangladesh and to know whether the educational institutions of Bangladesh are appropriate or not. Hence, a descriptive and analytical research design was chosen. Because descriptive research design helps to describe the current practices and events while analytical research design enables to establish relationship between variables (Aminuzzaman 1991). Here the research design of the present study was survey type.

Study area

The study was conducted at urban and rural area of two administrative divisions in Bangladesh e.g. Dhaka Division and Khulna Division. In Bangladesh, there are eight divisions. However, in the field of urban and rural, the study was tried to understand in depth of the need and probability of virtual interactive classes.

Sampling Method

Basically, purposive sampling method was used in the study so as to get the best information to achieve the objectives of the study. This method gave flexibility to the researcher to pick up only people who are likely to have the required information and be willing to share it. Moreover, the sampling method helped to ensure representation of different variation of service providers as well as service seekers. In other words, heterogeneity in the composition of sample of service seekers and providers (age, sex, senior-junior officials, education, and profession) was attempted to maintain as possible. Therefore in this study a combination of quantitative and qualitative methods was used. The question might arise why combination of these methods were used. Because as Creswell (1994:177) suggests, that it is advantageous to a researcher to combine methods to better understand a concept being tested or explored. Each approach has its strengths and its weaknesses, and reliance on anyone method is not appropriate. Therefore, in this research quantitative and qualitative research was used to better understanding as well as in depth to know the domain of the study.

Sampling technique:

Purposive sampling is a sampling technique in which researcher relies on judgment when choosing members of population to participate in the study. Purposive sampling is a non-probability sampling method and it occurs when “elements selected for the sample are chosen by the judgment of the researcher. Researchers often believe that they can obtain a representative sample by using a sound judgment, which will result in saving time and money”.¹ In this research purposive sampling method was used.

Sample Size:

156 students, 66 teachers and 30 other respondents were selected. So, total 252 respondents were selected for the study. Among the respondents, 61.90% were students, 26.20% were teachers who were mainly involved in online education

Sources of Data

Generally, there are two different sources of collecting data, viz., primary sources and secondary sources. The present study is based on both primary and secondary sources of data. Primary data were collected from the respondents of the study area directly using different data collection techniques. On the other hand, the study used different relevant publications, dissertations, books, journal articles, reports, and websites etc. as sources of secondary data. The data were collected from secondary sources must be useful to cross validate primary data and also to analyze the relationship among variables. Primary data were collected from the particular areas in urban and rural areas in Bangladesh.

Data Collection Method

The study was conducted based on both primary and secondary data. Primary data were collected through interviews and Questionnaire survey. Structured questionnaire containing both open and closed ended was used. A survey through a standardized questionnaire was conducted to collect both quantitative and qualitative information from. The semi-structured interviews were used for conducting with the policy makers, administrators, trafficking experts. Secondary data and information were collected besides the primary sources side by side secondary data will be gathered from journal articles, published books, government documents, education commissions' report, policies, reports of various committees related to online education etc. At the same time the present study will collect qualitative data through face to face interview by using a check list, Case study and Key Informant Interview (KII).

Questionnaire Survey

For unique and exploratory research new information must be required. Questionnaire survey is the easiest and most widely used instrument for data collection in this regard. This method allows the researcher to come in direct contact with the respondents, to observe their attitude during answering time and to analyze the issue under study in ordinary setting. The questionnaire precise enough to meet the objectives of the study research questions. Besides, comments and advice from participants defense on the study great support to frame up the questionnaire and other. The purpose and objectives of the study will be explained to the respondents as

¹Black, K. (2010) “Business Statistics: Contemporary Decision Making” 6th edition, John Wiley & Sons

simply as possible allocating sufficient time so that they swallow up the idea and can come back with spontaneous thoughts.

Validation of Data

Validity is the degree to which the allotted instruments convincingly measure, explore or describe the phenomenon in hand (Judd, Smith and Kidder, 1991). In this study data were collected by questionnaire survey and interview method was also been followed. The combinations of both the methods give the reliable and valid data. Validity refers to trustworthiness which is done through cross checking the data collect from one source to that of others. If themes are established based on converging several sources of data or perspectives from participants, then this process can be claimed as adding to the validity of the study (Creswell 2009, p.191).

Data Processing and Analysis

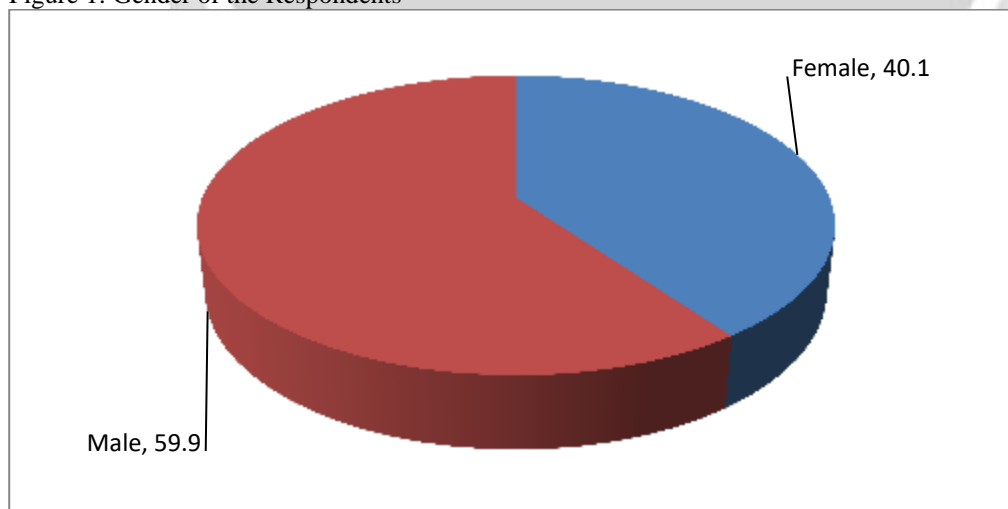
In qualitative study the researcher has the freedom to marshal gathered data to meet the desired objectives of the study (Creswell 2009). Partial data of questionnaire survey will be processed using simple statistics. The rest of the data were explained carefully to meet the aim of the study and research question and also attempted to establish relation among the variables. Some important and strong statements were referred in the analysis part to add value to the findings. Computer Program Statistical Package for the Social Sciences (SPSS) was used for data analysis. Data were analyzed according to the objectives of the study. Tables, graphs and statistical analysis were done by Computer Program Microsoft Excel.

RESULTS AND DISCUSSION

Table 1: Gender of the Respondents

Gender	Frequency	Percent
Female	101	40.1
Male	151	59.9
Total	252	100.0

Figure 1: Gender of the Respondents



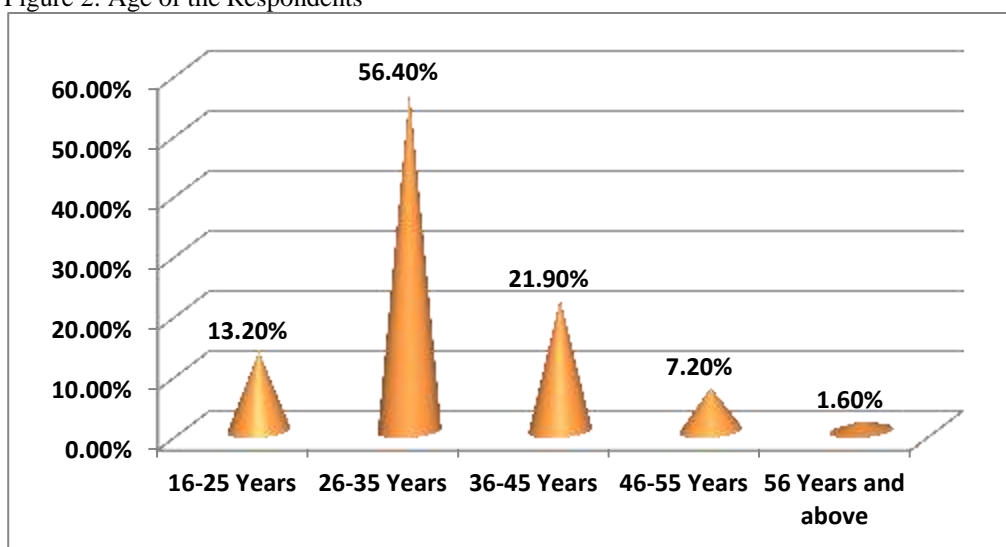
Gender of the Respondents has shown in the above table and figure. From the result it was found that 59.9% respondents were male and 40.1% respondents were female.

Table 2: Age of the Respondents

Age griyo	Frequency	Percent (%)
16-25 Years	33	13.20
26-35 Years	142	56.4

36-45 Years	55	21.90
46-55 Years	18	7.2
56 Years and above	4	1.6
Total	252	100.0

Figure 2: Age of the Respondents

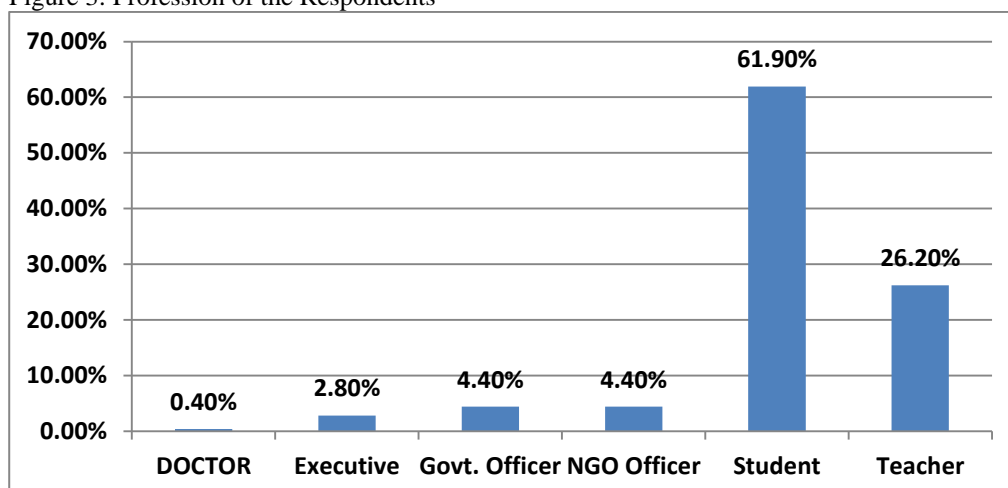


Age of the Respondents has shown in the above table and figure. From the result it was found that 56.4% respondents were age group 26-35 years which was maximum but 1.6% respondents were age group 56 years and above which was minimum.

Table 3: Profession of the Respondents

Profession	Frequency	Percent
DOCTOR	1	0.4
Executive	7	2.8
Govt. Officer	11	4.4
NGO Officer	11	4.4
Student	156	61.9
Teacher	66	26.2
Total	252	100.0

Figure 3: Profession of the Respondents

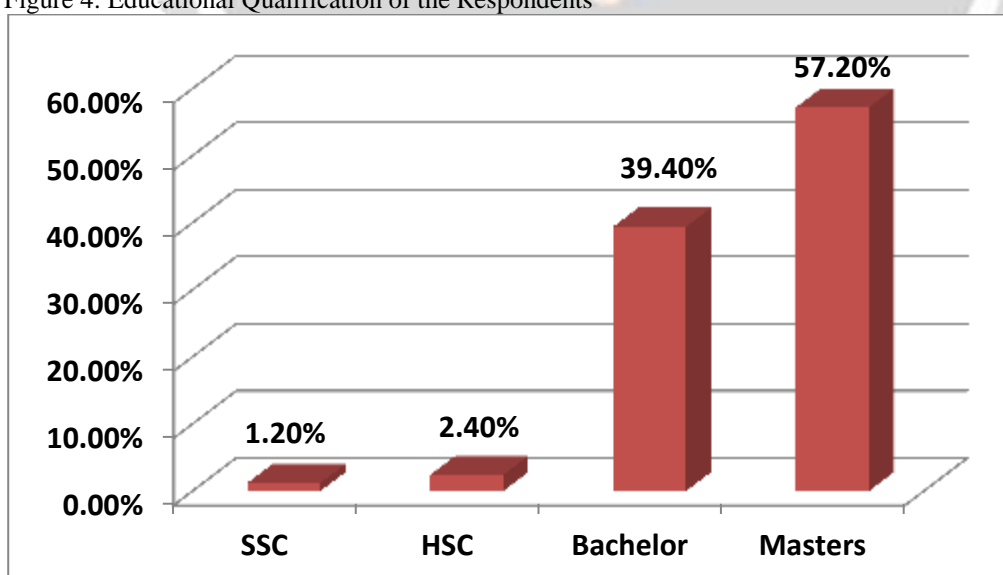


Profession of the Respondents has shown in the above table and figure. From the result it was found that 61.90% respondents were students which were maximum but 0.4% respondents were Doctor which was minimum.

Table 4: Educational Qualification of the Respondents

Educational Qualification	Frequency	Percent
SSC	3	1.2
HSC	6	2.4
Bachelor	99	39.4
Masters	144	57.2
Total	252	100.0

Figure 4: Educational Qualification of the Respondents



Educational Qualification of the Respondents has shown in the above table and figure. From the result it was found that 57.2% respondents had Masters Degree which was maximum but only 1.2% respondents were SSC passed.

Table 5: Use of Internet

Respondents' opinion	Frequency	Percent
No	47	18.7
Yes	205	81.3
Total	252	100.0

Use of Internet has shown in the above table. From the result it was found that 81.30% respondents use internet and 18.70% respondents' don't use

Table 6: Whether Respondents have Computer

Respondents' opinion	Frequency	Percent
No	73	29.0
Yes	179	71.0
Total	252	100.0

Whether Respondents have Computer has shown in the above table. From the result it was found that 71.0% respondents had Computer and 29.0% respondents had no computer.

Table 7: Whether Respondents have Internet Connection at Home

Respondents' opinion	Frequency	Percent
No	84	33.3
Yes	168	66.7
Total	252	100.0

Whether Respondents have Internet Connection at Home has shown in the above table. From the result it was found that 66.70% respondents had internet connection at home and 33.30% respondents had no internet connection at home.

Table 8: Whether Institutes have Internet Connection

Respondents' opinion	Frequency	Percent
No	50	19.8
Yes	202	80.2
Total	252	100.0

Whether institutes had internet connection has shown in the above table. From the result it was found that 80.20% institutes had internet connection but 19.80% institutes had no internet connection.

Table 9: Whether Respondents have high speed Internet Connection at Home

Respondents' opinion	Frequency	Percent
No	145	57.5
Yes	107	42.5
Total	252	100.0

Whether Respondents have high speed internet connection at home has shown in the above table. From the result it was found that 57.5% respondents have no high speed internet connection at home but 42.50% respondents have high speed internet connection at home.

Table 10: Whether Institutes have High speed Internet Connection

Respondents' opinion	Frequency	Percent
No	118	46.8
Yes	134	53.2
Total	252	100.0

Whether institutes have high speed internet connection has shown in the above table. From the result it was found that 53.20% institutes have high speed internet connection but 46.80% but institutes have no high speed internet connection.

Table 11: Whether Respondents stay far (5Km) from Institute

Respondents' opinion	Frequency	Percent
No	97	38.5
Yes	155	61.5
Total	252	100.0

Whether respondents stay far (5Km) from institute has shown in the above table. From the result it was found that 61.50% respondents replied that respondents stay far (5Km) from institute but 38.50% respondents replied that respondents don't stay far (5Km) from institute.

Table 12: Residence of the Respondents

Residence	Frequency	Percent
Rural	168	66.7
Urban	84	33.3
Total	252	100.0

Residence of the Respondents has shown in the above table. From the result it was found that 66.70% respondents lived in rural areas but 33.30% respondents lived urban areas.

Table 13: Division of the Respondents

Division	Frequency	Percent
Dhaka	100	39.7
Khulna	152	60.3
Total	252	100.0

Division of the Respondents has shown in the above table. From the result it was found that 60.30% respondents were from Khulna division but 39.70% respondents were from Dhaka division.

Table 14: Residence of the Respondents

Residence	Frequency	Percent
District	79	31.4
Union	43	17.1
Upazila	130	51.6

Residence	Frequency	Percent
District	79	31.4
Union	43	17.1
Upazila	130	51.6
Total	252	100.0

Residence of the Respondents has shown in the above table. From the result it was found that 51.60% respondents were from Upazila level which was maximum but 17.10% respondents were from Union level which was minimum.

Table15: Whether Respondents get Online Results from education board or University

Respondents' opinion	Frequency	Percent
No	55	21.8
Yes	197	78.2
Total	252	100.0

Whether respondents get online results from education board or University has shown in the above table. From the result it was found that 78.20% respondents replied that they get online results from education board or University but 21.80% respondents replied that they don't get online results from education board or University.

Table 16: Whether Respondents get message in mobile or email from Institute

Respondents' opinion	Frequency	Percent
No	47	18.7
Yes	205	81.3
Total	252	100.0

Whether Respondents get message in mobile or email from Institute has shown in the above table. From the result it was found that 81.30% respondents replied that respondents get message in mobile or email from institute but 18.70% respondents replied that respondents don't get message in mobile or email from institute.

Table 17: Whether Respondents have email address

Respondents' opinion	Frequency	Percent
No	73	29.0
Yes	179	71.0
Total	252	100.0

Whether Respondents have email address has shown in the above table. From the result it was found that 71.0% respondents replied that respondents have email address but 29.0% respondents replied that respondents have no email address.

Table 18: Whether Respondents have serious problem to go to Institute

Respondents' opinion	Frequency	Percent
No	129	51.2
Yes	123	48.8
Total	252	100.0

Whether Respondents have serious problem to go to Institute has shown in the above table. From the result it was found that 51.20% respondents replied that respondents have serious problem to go to institute

Table 19: Whether Respondents want online study at home

Respondents' opinion	Frequency	Percent
No	104	41.3
Yes	148	58.7
Total	252	100.0

Whether Respondents want online study at home has shown in the above table. From the result it was found that 58.7% respondents replied that respondents want online study at home but 41.3% respondents replied that respondents don't want online study at home.

Table 20: Whether Respondents like to take part interactive virtual class or meeting from home

Respondents' opinion	Frequency	Percent
No	99	39.3
Yes	153	60.7
Total	252	100.0

Whether respondents like to take part interactive virtual class or meeting from home has shown in the above table. From the result it was found that 60.70% respondents like to take part interactive virtual class or meeting from home but 39.30% respondents don't like to take part interactive virtual class or meeting from home.

Table 21: Whether Respondents feel easy to listen lecture or advice frequently by saved video data

Respondents' opinion	Frequency	Percent
No	193	76.6
Yes	59	23.4
Total	252	100.0

Whether Respondents feel easy to listen lecture or advice frequently by saved video data has shown in the above table. From the result it was found that 23.40% respondents don't feel easy to listen lecture or advice frequently by saved video data but 23.40% respondents feel easy to listen lecture or advice frequently by saved video data

Table 22: Whether Respondents have Uninterrupted Power Supply

Respondents' opinion	Frequency	Percent
No	173	68.7
Yes	79	31.3
Total	252	100.0

Whether Respondents have Uninterrupted Power Supply has shown in the above table. From the result it was found that 68.70% respondents don't have uninterrupted power supply but 31.30% respondents have uninterrupted power supply.

Table 23: Necessity of virtual interactive education for digital Bangladesh

Respondents' opinion	Frequency	Percent
No	23	9.1
Yes	229	90.9
Total	252	100.0

Necessity of virtual interactive education for digital Bangladesh has shown in the above table. From the result it was found that 90.9% respondent replied that virtual interactive education is necessary for digital Bangladesh and only 9.1% respondents replied that there is no necessity for virtual interactive education for digital Bangladesh.

Table 24: Suggestions for Government for introducing virtual interactive education

Respondents' opinion	Frequency	Percent
No	46	18.3
Yes	206	81.7
Total	252	100.0

Suggestions for government for introducing virtual interactive education have shown in the above table. From the result it was found that 81.70% respondents suggest Government for introducing virtual interactive education but 18.30% respondents don't give suggestions Government for introducing virtual interactive education.

Table 25: Whether virtual interactive education should be implemented to avoid pandemic situation and other unwanted situations

Respondents' opinion	Frequency	Percent
No	19	7.5
Yes	233	92.5
Total	252	100.0

Whether virtual interactive education should be implemented to avoid pandemic situation and other unwanted situations has shown in the above table. From the result it was found that

Table 26: Whether face to face education is better than virtual education

Respondents' opinion	Frequency	Percent
No	22	8.7
Yes	230	91.3
Total	252	100.0

Whether face to face education is better than virtual education has shown in the above table. From the result it was found that 91.30% respondents replied that face to face education is better than virtual education but 8.7% respondents replied that face to face education is not better than virtual education.

Table 27: Whether virtual interactive educations system can solve class absence

Respondents' opinion	Frequency	Percent
No	101	40.1
Yes	151	59.9

Respondents' opinion	Frequency	Percent
No	101	40.1
Yes	151	59.9
Total	252	100.0

Whether virtual interactive educations system can solve class absence has shown in the above table. From the result it was found that 59.90% respondents replied that virtual interactive educations system can solve class absence but 40.10% respondents replied that virtual interactive educations system cannot solve class absence.

Table 28: Whether Respondents take part any online classes recently

Respondents' opinion	Frequency	Percent
No	114	45.2
Yes	138	54.8
Total	252	100.0

Whether Respondents take part any online classes recently has shown in the above table. From the result it was found that 54.80% respondents replied that students take part any online classes recently but 45.20% respondents replied that students don't take part any online classes recently.

CONCLUSION

Online education is growing up due to corona pandemic throughout the world in 2018 to 2021 and going on. New softwares are coming for virtual meeting and virtual education. Corona viruses are very much deadly. So, all physical attendance is restricted now a day worldwide. All assembly, meeting and any physical gatherings are strictly prohibited. But still we need to work, need to study, need to get foods. So, all things are trying to do virtually. Specially education need to be nonstoped. Ages of the students are great factor for their life and to enter in job market. So, now education is the priority to go through online. Governments of many countries develop high speed internet service in their countries to ensure online communication for their education, marketing, meeting etc. In this research I found high speed internet service mostly available in urban area, in rural area this high speed internet connection is not available. So, rural students cannot connect to the teacher of the institutions.

Government should develop their high speed internet connection as early as possible for the betterment of the students. Private universities and English medium schools of urban area are giving their education to their students through online system continuously. But public universities and government schools and colleges of urban areas are still fail to give education to their students and students of rural area are badly suffering to get the online education due to unavailable high speed internet connection so it is priority for the government to build high speed network in the country for running the all level of educations. Most of the cases the poor students are unable to buy Smartphone so government can take necessary steps to supply Smartphone to the poor students. The mobile phone internet package is another problem to the poor students in Bangladesh. The costs of mobile phone internet package cost are very high in Bangladesh in comparison to the neighbouring countries of us. So government can take necessary steps to reduce the cost of mobile phone internet package.

It seems that virus variants will continue further years, so man to man physical contact will be deadly for a longtime. Face to face education is comfortable so software developers are trying to build online connectivity more and more as like physical environment. Facebook owner Mark Zukerberg declares the Meta version network system where one can feel closer to other though they are in distant area. Students who are connected in meta version connectivity with a virtual classes they can feel sitting in a class room where teacher are giving lecture and students can ask question to the teacher in the same class. Bangladesh govt. is trying to make sure the high speed internet connection throughout the country by launching Bongabandhu satellite and by the fiber optical cable line from urban to rural area. All businesses and educations will be operated online in future. By the opportunity of high speed internet connection society activation are going to the paperless environment, every currency is going to shift from paper currency to digital currency in the whole world. In education system most of all institutions are using to use online admission, online fees collection, online interactive class system, online exam and online result publishing. Specially in covid-19 virus pandemic most of all students and teachers do not want to go out of home and they feel comfort to practice online education.

In this research 252 respondents answered the questionnaire from Dhaka and Khulna division. Respondents are mostly around 30 years of age and their level of education graduates and masters pass. The respondents are mostly teachers and students by profession. Respondents are using internet 81.3%, they have computer personally 71.00%. Respondents' institutions have internet connection are 53.2%. Respondents like interactive virtual class and want to attend meeting virtually from home 60.7% But 68.7% of respondents have no uninterrupted power supply (UPS) at home. Whereas government power supply is very much poor in rural areas. Without frequent power supply internet use will be interrupted. Respondents opined 90.9% about the necessity of virtual interactive education to build digital Bangladesh.

RECOMMENDATION

The recommendations of the study are as follows:

1. Government of Bangladesh should establish electric power supply in all urban and rural area which is the most priority work in digital Bangladesh.
2. Government should implement high speed internet connection throughout urban and rural area of Bangladesh.
3. Government should use Bangabandhu satellite for high speed 5-G wifi connection all over Bangladesh.
4. Government should train the students to be developed for a paperless society in digital Bangladesh.
5. Government should educate students parallel to the first world country's students as our students will be capable to communicate with present science & technological knowledge.
6. Government should care the GDP growth of Bangladesh through digital network development.
7. Private sectors and NGOS should take initiative to develop their service by using internet connection mostly in rural area in Bangladesh.
8. Government should set up the BTCL internet tower in remote area of Bangladesh where road communications are still unavailable.
9. Government should make free wi-fi zone in rural area where students are very poor.
10. Government should take necessary steps to supply Smartphone to the poor students. Government should reduce the cost of mobile phone internet package for the education sector.
11. Bangladesh is growing up in economy and education. The GDP growth rate of 2021 in Bangladesh is 5.47%, it is better from many neighborhood countries of Bangladesh. But statistics reported in 2019 just under 13% of the population in Bangladesh had access to the internet; it is very poor internet connectivity in Bangladesh.

So, Bangladesh Government should take immediate action to increase internet connectivity to the poor students.

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