Prospects and Challenges of Online Education in Bangladesh

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Abstract: The concept of online education as an advanced system for educating mass people by using information and communication technologies (ICTs) has been received a significant level of interest in recent years in most of the developed countries in the world. Especially in higher education, online education is increasingly becoming common and emerging as an opportunity for delivering entire education online. It ensures access to information about education, training and lifelong learning through the use of technologies. The rapid and intensive use of ICTs in education in the developed countries have facilitated to the establishment of 100% ICT-based universities called 'virtual universities'. In addition, many world-leading conventional universities are now also offering some of their academic courses through online for their distant learners and established themselves as the 'dual mode universities'. In Bangladesh, the conventional universities and educational institutions are not able to provide the opportunities for higher education for a large number of young students for different reasons. Online education can be considered as an important alternative to offer these young students an opportunity for higher education. In this paper, we have outlined the perceptions of faculties, students and guardians about online education. We have also discussed the present scenario of education and ICT of Bangladesh, prospects and challenges of online education of Bangladesh considering the current trend of ICTs expansion in the country.

Introduction:

Today, technology has been extensively used in the field of education worldwide. It provides new opportunities for improving teaching and learning processes. It has brought changes in our thinking of the method of education. In recent years, the growth of online education programs in the developed countries has been fueled by the advancement of the internet and modern information technology that changed the face of education. Due to the advancement of the latest technology, online education has emerged as an alternative or considerable supplement to traditional mode of teaching and learning. It can be defined as an

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innovative approach for delivering well-designed, learner-centered, and interactive learning environments to anyone, anyplace, anytime by utilizing the internet and digital technologies. The developed countries have enjoyed the benefits of online education due to some predominant facilities like well-established infrastructure, latest technology etc. Online education can be regarded as a relatively new concept in any developing country like Bangladesh, where internet facility has mostly been limited to urban areas whereas most of the people live in rural areas. Despite technological limitations and poor infrastructure facility, a well-designed online education framework is expected to contribute significantly to the educational development and thereby having a long-term effect on poverty alleviation of Bangladesh.

2.0 Research Objective

The objective of this research is to study the prospects and challenges of online education in Bangladesh.

3.0 Literature Review

Scagnoli (2005) asserted that online education has significantly increased in popularity among students of all ages. This is mainly because taking courses at online schools and universities offers clear benefits over taking courses at conventional educational facilities. Students are given the opportunity to choose from various programs and courses which are not available in the area where they live in. This is especially beneficial for those who live in rural areas that only have one or two educational facilities, which most of the time, offer limited course and program options for students. It offers flexibility to students. Because they can attend classes and courses whenever and wherever there is a computer and access to the internet, they can easily plan out a schedule that would work for them. Because of the flexibility offered by online learning, not only undergraduate students, but also individuals who already have full-time jobs or other commitments are able to take supplementary courses and even earn their college degrees online.

Online education allows a more student-centered teaching approach. Because every student has his or her way of learning that works for them, getting an online education may help in ensuring that each lesson or material is completely understood before moving on to the next, which in turn, could result to better learning. Online course materials can be accessed 24 hours a day every day. This means that students can easily read and review lectures, discussions and other materials relevant to their

course. There are some students who find it a bit difficult to understand spoken material in a typical classroom setting because of a number of distractions, boredom or tiredness. Because they can simply access the material online once they are prepared to learn, students are able to take in and understand the material a lot better. Online education offers a lot of savings because there are no additional costs for transportation and accommodation. Online education programs and courses also cost a lot cheaper than courses that can be taken in a traditional school (Brainard, 2010).

Rosina, C., Poe, E., & Manhas, P. S. (2008) stated that students who are taking online classes can also socialize, interact and discuss things that are not related to the course through chat rooms which are usually offered by most online institutions. Because online instructors usually come from different locations across the globe, students are exposed to knowledge shared by the instructors which cannot be learned in books. The different personal backgrounds of online instructors also allow them to teach students different perspectives on how class concepts can be applied in actual business situations. Students of online courses are also given the chance to talk with their instructors whenever they want to. Through online chat, email and newsgroup discussions, students and teachers can discuss concerns related to the material without having to wait for office hours.

Bernard (2009) performed a meta-analysis on the online education and examined three types of interaction treatments: student-student (SS), student-teacher (ST), and student-content (SC). Student-student interaction may be built into distance education courses through the use of group projects. Student-teacher interactions are easy in hybrid courses where there are some face-to-face meetings and a bit more difficult in fully online courses. Even with fully online courses, student-teacher interactions can occur via the use of email, phone calls, discussion boards, chats, and videoconferencing. Student-content interactions can be affected by having students read online material, collect information, or watch a video. He concluded that all three types of interactions are important and should be an important part of fully online courses since they enhance student learning as well as satisfaction.

Battalio (2007) stated that not all students have the same learning styles. Some students may prefer learning in a traditional, face-to-face environment; others may thrive in fully online courses. Younger students,

who do not have family obligations and are comfortable with social networks, may benefit greatly from online learning communities. Older students that work and have family obligations may not be satisfied with courses that utilize online learning communities. The belief that the best way for students to learn is via traditional, face-to-face classes is rapidly becoming obsolete. The best one can claim is that the traditional class offers advantages for some students. Hybrid or blended courses that combine both online and face-to-face teaching are probably the ideal way of teaching most classes. Classroom learning with a standard curriculum taught to young people of a single age group, rather than segregated by interest or abilities, may not be the way to go in the internet Age. Courses that are offered fully or partially online can enhance creativity since they can use numerous teaching tools that include animations, videos, wikis, blogs, web links, webinars, and virtual labs.

Azzam (2012) asserted that young people today are always multiprocessing and conducting several tasks simultaneously. Many can be working on the computer, talking on their cell phones, and listening to music, all at the same time. The goal of education today, according to Brown, is to teach students information navigation, i.e., how to find useful information on the internet. Also, using online courses allows students to learn at their own pace.

Liaw, Huang & Chen (2007) focused on the use of information technology and the internet as a teaching and learning tool which is rapidly expanding into today's learning environments, where online learning delivers a broad array of solutions that enhances knowledge and performance using internet technologies. Online learning is essentially the computer and network-enabled transfer of skills and knowledge. It includes web-based learning, computer-based learning, virtual classroom opportunities and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV etc.

Online education is a multi-tier pyramidal framework that is tailor-made for those galaxies of students who yearn for flexibility, leverage, self-paced learning. One gets incited to appreciate the student-focused benefits endowed by online education that is entirely elusive in the exceptional method of education. Simply put, student-oriented education turns out to be the norm in online learning with more emphasis on global interaction and latest expansion of knowledge (Milani, 2008).

Manhas (2010) stated that online education comprises all forms of electronically supported learning and teaching. The web becomes a virtual learning space where knowledge is shared and collaboration happens, not only between those who are geographically dispersed, but also among those who work on similar ideas at different times and contribute to that knowledge creation. The online education option enables the stakeholders, especially students, to extract information from different types of sources anytime, anywhere.

The rapid and intensive use of ICTs in education in the developed countries facilitated to the establishment of 100% ICT-based universities called 'virtual universities'. In addition, many world-leading conventional universities are now also offering some of their academic courses through various ICTs for their distant learners and established themselves as the 'dual mode universities'. The historic launching of 700 courses from 33 academic disciplines as 'Open coursewares' by Massachusetts Institute of Technology (MIT) offers a tremendous resource for faculties, students and self-learners around the world (Pierre, 1998).

Computer literacy and access are set of challenges for promoting online education in Pakistan. While the government is trying to make ICT infrastructure more affordable. The Higher Education Commission (HEC) has also facilitated the obtaining of the International Computer Driving License (ICDL), which will help pace up computer literacy in the country (HEC, 2006). English as a medium of imparting education is a serious hindrance in ensuring the promotion of online education within Pakistan. This is because most of the population accounted as literate is not familiar or fluent in English language. The content must thus be converted into Urdu language for ensuring greater access, acceptability and utility.

4.0 Research Scenario: The Open University of Catalonia (UOC)

The Open University of Catalonia or UOC is a fully online university with headquarters in Barcelona, Spain. It was founded in 1995 by the Catalan Government with the mission of providing people with lifelong learning and education through intensive use of information and communication technologies. The UOC is an internationally recognized online university with a community of over 60,000 students, distributed in several undergraduate and graduate programs. The distributions of students are in Undergraduate (43,524), Postgraduate (3,557), Doctorate (161), etc. as on December, 2012 (http://www.uoc.edu/portal/english).

UOC students belong to different parts of the world, but they are mainly located in Spain and South America. About 60% of UOC undergraduate students are adult students (over 30 years old) that typically combine their professional activity and/or family responsibilities with their academic duties. Educational services are delivered by a team composed of more than 4,000 teaching and management staff -including UOC faculty of 256, UOC online collaborators of 3,378, most of these professors from other Spanish universities and 491 management staff. Some of the most popular degrees (in number of registered students) offered at the UOC are as follows: Computer Engineering, Business Administration and Management, Psychology, Telecommunications, Information and Communication Sciences, Law, and Humanities etc. (http://www.uoc.edu/portal/english).

5.0 Scenarios of Education and ICT of Bangladesh

Bangladesh is one of the most densely populated countries in the world with nearly 160 million people within an area of 1,47,570 square kilometers. Its' vast population would be the major resources of the country. Education has been emphasized as a fundamental right like food, shelter etc in Bangladesh. It has been estimated that after passing the Higher Secondary Certificate (HSC, Grade XII) examination, only four percent students pursue higher education in Bangladesh because all the conventional universities combined do not have adequate seats to accommodate them (Anonymous, 2007). As a result, a large number of these young students have been forced to give up their dreams for higher education. Online education can be considered as an important alternative to offer these young students an opportunity for higher education.

Although tremendous success has been achieved in decreasing the rate of drop-outs at primary and secondary levels, access to higher education is seriously constrained in Bangladesh due to lack of enough seats in 34 public(including National University and Bangladesh Open University) and 52 private universities (UGC annual report, 2011). It is almost impossible for the government to establish enough number of new public universities to satisfy the growing demand of higher education in this highly populated developing country due to budgetary constraints. Online education can be an option for both regular young students, adult and in-service life-long learners. It can allow the learners to study from anywhere in the country at a minimum cost, by using open-source technology, open-course materials, e-learning methods etc.

Computer, the important tool for communication and online education, was first introduced in Bangladesh by the Atomic Energy Commission in 1964. To be followed later in the 70s by its use in the financial sector. Personal Computers gained popularity in the early 1990s when they became more user-friendly and affordable, but the real boost came in 1998 when the Government exempted computers and ICT accessories from taxes, a move that coincided with substantial price reductions in the global market. The consumption of ICT in Bangladesh is rapidly increasing both in public and private sectors. Almost all leading universities have departments of computer science and engineering, and thus at least 6000 new graduates are joining in ICT in the country (A and J consultants, 2004).

Bangladesh is initiating to integrate ICT into its education system. Government of Bangladesh initiated a pilot study of e-Learning of Math in Secondary Schools in Gazipur and Comilla from 2009 with the support of BRAC under TQI-SEP (Teaching Quality Improvement in Secondary Education Project). Ministry of Education formally inaugurated Mobile ICT Lab of TQI-SEP on 23rd February, 2010 in order to provide e-Learning for the underprivileged secondary students of rural Bangladesh. A total number of 17 Mobile ICT Labs in 17 Cars (14 Microbuses & 3 Four Wheel Drive Pickups for hill tracks, haor areas and remote areas) moved all over the country to introduce e-Learning system with the teachers and students of one thousand schools by December, 2010. Each lab contained five laptops, five wireless internet modems, two digital cameras, multimedia projector, webcam, printer, pen drive, interactive board, e-Learning CD, speaker, generator etc. This initiative may ensure primary ICT knowledge as well as ICT based education for the students and also enhance the teaching capacity of the teachers (The Daily Samakal, 2010).

6.0 Methodology of the Study

For this study, sample consists of 250 students of different ages who have passed the HSC examination, waiting to enroll in undergraduate program; the students who are currently studying the undergraduate program; the students who have completed the undergraduate program, waiting to enroll in postgraduate program have been selected. Dhaka city has been taken as a sample area for this work. The questionnaire has been structured to investigate the students' perceptions about online education with 10 statements in which students have been asked to what extent they agreed or disagreed with each item on a five-point scale with

descriptive anchors ranging from (1) 'strongly agree' to (5) 'strongly disagree'. Another sample consists of 50 faculties who are teaching at different private and public universities of Dhaka city have been considered. The questionnaire has been structured to investigate the faculties' perceptions about online education with 10 statements in which they have been asked to what extent they agreed or disagreed with each item on a five-point scale with descriptive anchors ranging from (1) 'strongly agree' to (5) 'strongly disagree'. Another sample consisting of 50 guardians of Dhaka city have been considered. The questionnaire has been based on answers to yes/no with 5 statements to investigate the guardians' perceptions about online education. Also, for each of the perception statement, frequency distribution and relative frequency distribution have been calculated.

7.0 Results of the Survey

7.1 The Perceptions of Faculties about Online Education

Our experiences in surveying faculties about online education have shown that they have given diversified responses about it. Faculties have a more optimistic view of the implementation of a better educational system in Bangladesh through online education. About 70 percent of faculty members surveyed have agreed that it is possible to implement a better education system in Bangladesh through online education whereas only 14 percent have disagreed with it. About 54 percent of the faculty members have agreed that online education can help students eligible for the job market better than traditional class-room based education. Faculty members with knowledge of and exposure to online learning have a much more positive view of its prospect or potential. About 64 percent have agreed that online education can bring revolution in the education system of Bangladesh with respect to cost, time and labor. In successful implementation of online education, technological knowledge of faculty members are necessary. The survey has found that about 86 percent of the faculties have agreed with this statement. Faculties have a positive view of the learning outcomes for online education. Nearly 80 percent have agreed that online education can provide more variety of learning experiences compared to traditional education. Only 10 percent has opposed it. Faculties have been asked about their perception of the job orientation of online education. Interestingly, 40 percent have replied that online education is more job oriented than traditional education, whereas 30 percent have opposed it. About 84 percent of the faculty members

have agreed that responses to student questions may be delayed by hours or even days in an online learning situation whereas it may be instantaneous in the conventional classroom. Also, about 60 percent of the faculty members have strongly agreed that face-to- face conversation or contact with the instructor is necessary for proper learning. Almost 90 percent of the faculty members have agreed that it is possible to train young software developers and support them with the necessary technical instruments to develop usable online education system in Bangladesh. Also, faculties have viewed their concern about present infrastructure situation of Bangladesh. About 94 percent have strongly agreed that there is scarcity of high quality internet infrastructure and networking in Bangladesh which are pre-conditions for the development of online education system.

7.2 The Perceptions of Students about Online Education

We have surveyed students of different ages starting from 17 years in order to understand their perceptions about online education. Out of them, 56 percent are male students and the rest 44 percent are female students. We have experienced some positive responses from them about online education. Students have been asked whether it is possible to implement a better education system in Bangladesh through online education. Approximately, 68 percent of the students have agreed that online education can help to implement a better education system in Bangladesh. Almost 63 percent of the students surveyed have agreed that online education will help them eligible for the job market better than traditional education system. About 57 percent of the students have agreed that global knowledge sharing is possible through online education, whereas 15 percent have disagreed. Students have shown mixed responses about the costing of online education. About 43 percent of the students have replied that online education will be less expensive than traditional education, 27 percent have made no comment on it, and 30 percent have replied that online education will be expensive. Students have been asked about their perception of the job orientation of online education. Interestingly, 62 percent have replied that online education is more job oriented than traditional education, whereas 33 percent have opposed it. About 89 percent of the students have agreed that responses to their questions by the instructors may be delayed by hours or even days in an online learning situation whereas it may be instantaneous in the conventional classroom. Also, about 71 percent of the students have strongly agreed that face-to-face conversation or contact with the

instructor is necessary for proper learning. About 64 percent of the students have agreed that they are ready to learn anywhere, anytime. Social-physical interaction in education system is very important for the development of the future of students. About 78 percent of the students have agreed that students in online education courses may feel isolated or miss the social-physical interaction that comes with attending a traditional classroom.

7.3 The Perceptions of Guardians about Online Education

For our research work, we have also surveyed guardians of students to know their perceptions about online education. About 86 percents of the guardians surveyed have replied that they are concerned about the tuition fees of online education. About 54 percent of the guardians have replied that online education can be as effective as in-person instruction in helping students learning, whereas 46 percent have opposed it. About 56 percent of the guardians have replied that they are doubtful about the quality and acceptance of online education, whereas the rest 44 percent are hopeful of the quality and acceptance of online education. Interestingly, about 78 percent of the guardians have replied that online education can help their children eligible for the job market better than traditional education.

8.0 Prospects of Online Education in Bangladesh

The challenges facing developing countries like Bangladesh is how to expand the higher education system throughout the country. The expansion of higher education through public institutions has its limitations, given the fiscal capacity of the country. The option then is to expand higher education relying on non-state resources such as the promotion of online education. Technological advances and their availability may provide the opportunities for people to study at their own pace. Bangladesh as a country has opportunities to improve in the areas of online education.

8.1 General Educational Perspective

Recently, many traditional education systems have shifted towards new methods of teaching and learning through ICTs especially in the private education sectors of Bangladesh. Today, the recent developments of ICT have enabled us to carry out various educational functions efficiently and easily. By using internet we can get information of any course or program of study, know the college/University and its faculty and facilities, and

select a program. The faculties can deliver course materials, organize course discussions with students online through various means such as Learning Feedback System (LFS). In Bangladesh, the educational functions such as course information(prospectus), admission, registration, teaching and learning, formative and achievement evaluation have been started with the help of ICT. So, it can be said that there is a good opportunity to implement online education system in Bangladesh. Currently, it is possible to develop course curriculum by taking into consideration the recent global changes and ICT revolution.

8.2 Students' Expectations

Today, students are well-informed of global education systems. They expect a global education environment at home in Bangladesh. They expect a world class education system in Bangladesh without going abroad. Online education system has the potential to meet the Bangladeshi students' needs and expectations by addressing their educational problems. It may provide alternative ways of communicating with teachers and fellow students, provide a greater variety of learning resources and modalities, extended the flexibility and quality of group-work, and improved the opportunities for providing students with feedback on assessment tasks. Well trained teachers with positive outlook on ICT are likely to play a vital role in this task.

8.3 The Learners' Perspective

Online education provides the courses round the clock i.e. 7 days a week and 24 hours a day, which can attract working peoples, students and even individuals. Learners can access the materials in their own time and study at their own pace and place. The courses provided in this system may be of diversified topics, that can attract the large crowd from all the backgrounds. Once the content of the course has been uploaded on the server, it is relatively inexpensive to distribute domestically and worldwide. Also, the contents can be easily and regularly updated and instantly available to all learners.

Online education helps students save on the time required for traveling to and from the institutes.

In this regard, those people, who are on the jobs, or cannot go to regular college or university for certain issues, can easily opt for some online courses of their choice. A student can manage his day time activities, jobs and responsibilities with his online assignments and educational tasks

easily. The students have the flexibility of carrying out their course studies from the comfort of their homes. It can be beneficial for professionals as it allows them to learn without having to attend classes which may interfere with their work schedules. These courses can also help gain advanced knowledge on new procedures and developments which in turn improve performance. The curriculum can give practical solutions based on day-to-day situations encountered by others in the work environment. Since courses offered are often customized to specific industry and sometimes to specific companies they tend to be highly result-oriented. Career professionals are already operating in full time schedules and online courses allow them to balance their learning with their work and increase their skills.

8.4 The Institution Perspective

The internet revolution has drastically changed every aspect of our lives, and we can see it in the changing business practices, banking, retailing and now in education. In this process, the university or other educational institution can offer programs on the web, and students are provided with study materials electronically. These institutions have the potentiality or capacity to implement online education. Furthermore, the online education is cost effective as well. In the online education, universities may enjoy certain cost advantages. In the traditional classroom based education system, there requires class room arrangements, utility costing and other overhead costs. In online education system, the institutions can avoid these expenses. The study material, books and research papers can be downloaded from the portals, once a student is registered. So, the students save a lot of cost in terms of books and study material as well.

9.0 Challenges of Online Education in Bangladesh

Online education in the universities and educational institutes of the developed countries are getting popularity day by day. To implement effective online education system in Bangladesh in the same way as it has been implemented in numerous developed countries, there is a need to understand the challenges of online education. We have identified different challenges of online education which have been discussed below:

9.1 Course Development

One of the challenges of online education is related to the course development. The first issue is the curriculum which stipulates much of

the course actions and content. There is a necessity of developing new curricula specifically designed for an online education thereby showing awareness that it is different from traditional class-room based teaching. The subject content of the course also matters and refers to what will actually be taught or learned. The content should be interesting and relevant, accurate, up to date and in line with the needs of future employers. There is a need for interesting learning interactions, frequent follow-ups, teacher interventions and continuous assessments.

9.2 Student Concerns

An important factor is the priority of the students in their activities. Having enough time for education is an important predictor of a student's learning and it is proved that those who study more hours are generally more successful in their studies. Sometimes, they face big problems in arrangement of their time due to conflicting priorities with work and family commitments. Another concern is the students' economic conditions for studying. Financial difficulties and lack of student funding can be a predictor of student failure to study. The English proficiency of students, specially the students of rural areas of Bangladesh, are not up to the mark which may hinder the application of online education system in Bangladesh. The students also need some technological confidence, just having access to the technology is obviously not enough. The students also need to have the necessary computer skills and feel confident in using computers. For example, they must be able to use a variety of search engines and be comfortable navigating on the World Wide Web, as well as be familiar with Newsgroups, and email. In Bangladesh, students of urban areas specially in Dhaka city are technologically sound, whereas, students in rural areas have lack of technological knowledge. Lack of experience with computers can be a major hindrance for learning especially for students in rural areas of Bangladesh. A further challenge that is related to the students' personal characteristics which has an impact on the students' performance is the home environment. A stable and supportive study environment affects online education to a very large extent. Because of family conditions, a student has to support his family in Bangladesh.

It can be said that an online method of education can be a highly effective alternative medium of education for the mature, self-disciplined students which places a greater responsibility on the them. In order to successfully participate in an online program, student must be well organized, self-

motivated, and possess a high degree of time management skills in order to keep up with the pace of the course. For these reasons, online education may not be appropriate for the students who are dependent learners and have difficulty assuming the responsibilities.

9.3 Problems of Student feedback

Online education system does not offer immediate student feedback. In a traditional classroom setting, a student's performance can be immediately assessed through questions and informal testing. With online education, a student has to wait for feedback until the instructor has reviewed his or her work and responded to it. In our survey, both the students and faculties have shown their concerns over this matter. Also, online education does not give students the opportunity to work on oral communication skills. Students in online education courses do not get the experience of practicing verbal interaction with faculties and other students. In our survey, most of the students have replied that students in online education courses may feel isolated or miss the social-physical interaction or social engagement that comes with attending a traditional classroom.

9.4 Technological and Infrastructural Challenges

This category concerns the technological requirements, the costs of using the technologies, how they are accessed and in what language they are available. Online education system depends on hardware and software infrastructures or platforms that require constant attention. One commonly discussed factor is access to the information. In order to access the full range of the content, the reliability of the internet connection and the bandwidth are commonly required. However, due to bandwidth and connectivity limitations, downloading of engaging content to the learners may be slow. This creates frustration and boredom among learners and affects the ease of learning. Another factor is the cost of these technologies. In Bangladesh, there is a need for affordable and low-cost ICT and low user charges. Here, there is a large segment of the population that is computer illiterate. This is especially true in the rural areas. This may hinder the introduction and implementation of online education. In our survey, most of the respondents, particularly the faculties, have replied that there is scarcity of high quality internet infrastructure and networking which are pre-conditions for the development of online education. And, most of them have agreed that it is possible to train young software developers and support them with the necessary technical instruments in order to develop usable online education system.

Technological and institutional infrastructure lies at the heart of the challenges confronted by Bangladesh in promoting online education. The pace of developing reliable and speedy ICT infrastructure in the country needs to pick-up. Online education requires uninterrupted electricity power supply that the country like Bangladesh lacks for a long time. Load shedding is a macro level problem in Bangladesh that affects all sectors to a greater extent, which may hinder the prospect of online education in Bangladesh. Especially, in the rural areas of Bangladesh, there is huge problems of load shedding that may have serious impact on implementation of online education. Most of the village is not under rural electrification. So the running of technology specially computer, audio-video conferencing is very difficult to implement.

User friendly and reliable technology is critical to a successful online education program. However, breakdowns can occur at any point along the system, for example, the server which hosts the program could crash and cut all participants off from the class; a participant may access the class through a networked computer which could go down; individual PCs can have numerous problems which could limit students' access; finally, the internet connection could slow down or fail etc. In situations like these, the technology may limit the online learning process.

9.5 Awareness

Most of the illiterate people in rural areas of Bangladesh are not still familiarized with ICT. They are not friendly with technology. They are habituated in a way that providing of education should be done in conventional mode. Generally there is still a lack of awareness amongst the population, especially parents, of the effectiveness of online education. In our survey, the guardians of Dhaka city have replied that they are well informed about online education but, the parents, especially in the rural areas of Bangladesh who are familiar of the traditional learning mode, have very little knowledge about it.

10.0 Limitations of the Study

The study has several limitations that should be considered in evaluating the results. This study is limited by the fact that the students who are residing and studying in Dhaka city have only been considered. Because of time constraint, we could not address and reach students from outside Dhaka city. Future research could address this limitation by considering this study with a national sample of students and producing results that would be generalizable to a national population. As sample size could

affect study results, future research should ensure that sample size is large and is selected from throughout the country. Another limitation is that faculties who are teaching at different private and public universities of Dhaka city have been considered. Faculties outside Dhaka could not be addressed for time limitation. Future research could address this limitation for better survey. As the study considers only the guardians of Dhaka city, the sample of guardians from outside Dhaka city may help to reach better result.

11.0 Conclusion

Education is considered as one of the pre-requisites for the development of a country. In Bangladesh, it is a matter of great concern about to accommodate growing number of students for quality higher education. The recent developments and awareness of the Government of Bangladesh on ICT have opened an opportunity to adopt online education for educating mass of its rural and urban people. Considering the availability and access to ICTs, the conventional public and private universities may introduce education through online side by side with face-to-face instructions in the classroom. This revolutionary approach will help to reach the dream for the development of a knowledge-based 'digital Bangladesh' by the year 2021. Online education can offer techno-based environments that expand learning opportunities and can provide top quality education through a variety of courses. In introducing online education system, a university should be well-organized and fully prepared. Before starting the program, it may give training for 1 or 2 month(s) to the students about its usage as the system is new to them. After that, students will be habituated with the system and cope with the system. Institutions of higher education should have internet connections in the offices, laboratories and classrooms. Government should intensify effort to provide uninterrupted power supply. Multiple workshops and seminars should be organized for teachers to enable them upgrade themselves in ICT. For building better Bangladesh, online education system can help to a greater extent.

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