

Jaago Online School: Exploring the Initiatives to Enhance the
Quality of Education through Technology

By

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A thesis submitted to the BRAC Institute of Educational Development in partial
fulfillment of the requirements for the degree of
Master of Education in Educational Leadership & School Improvement

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Declaration

It is hereby declared that

1. The thesis submitted is my own original work while completing degree at Brac University.
2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

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Approval

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Ethics Statement

During this thesis, Ethics issues are abided carefully and strictly. This research has human participants. Number of participants are 12. Their sensitive personal issues and cultural issues are taken into consideration. There have been no serious adverse effects on the research participants as cultural identity is same and participants are very much professional. Hence, the purposes of the research are shared. Audio and visual recording are taken with consent. The data and other information for the research have been stored and archived properly in the computer and notebook of mine.

The study is objectively interpreted and analyzed according to the results, including an analytical discussion of the importance of their findings. The findings are sufficiently contextualized in light of previous and ongoing studies. Any of the references used are correctly disclosed and cited. I was directly and actively involved in significant work leading up to the paper, and I'll be held accountable for the material used here in this research paper.

Abstract

This study was conducted to explore the idea of quality of education incorporation with technology in the education system of Bangladesh and how this online education through technology is able to enhance quality of education. Technology becomes the part and parcel of the day-to-day life. The future of education is about access, learning and cooperation everywhere, both locally and globally where technology is playing a pivotal role. Bangladesh is working to incorporate ICT into the education sector to enrich the experience of learning. In Bangladesh, online education is a common phenomenon as advance technology and its uses has increased significantly. In this research the first online school in Bangladesh founded by Jaago Foundation is chosen to explore quality in education through technology. This research takes an in depth look in to the operation, teaching-learning process, institutional capacities, technology, curriculum and teacher's recruitment and training being practiced in the Jaago Online School. Hence, through interview, FGD and school observation all the key people from R & D manager to Education Coordinator, online school teachers, students are participated in this study.

Jaago online schools significantly prove their worthiness and credibility through their online education program in the current context of educational system. Jaago Foundation set up their central operation at Rayerbazar. Online teachers facilitated all online school over the internet using apps WebEx. Participants of the study described how technologies changing the learning process and improving the quality of education. Participants especially teachers expressively shared that technology helps them a lot with teaching materials. When they took online class with visual aids, videos, songs, using art or shapes. Jaago provides necessary trainings to teachers and give regular feedback through their R & D team.

Keywords: Technology, Quality of Education, Online Education, ICT, Access and Learning, Curriculum, Training, Teaching learning process.

Dedication

This Thesis is dedicated to the students of Jaago Foundation School situated at Korail Slum, Banani, Dhaka; who are the inspiration for me and my work in education sector.

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I would like to thank my supervisor Sima Rani Sarker, Faculty member of BRAC IED. Without her support, guidance, patience, feedback and cooperation this thesis would not have been possible to complete. My sincere gratitude to my previous supervisor Riffat Nahreen, Faculty member of BRAC IED Who has guided me through out and sketch the outline of the thesis, facilitated to get the literature and support me always. Gratitude to Mr Zihad Zaman, Manager, Research & Development Team of Jaago Foundation, except his support I would not be able to collaborate with prestigious Jaago Foundation and its online school operation. I am much obliged to the people of Jaago Foundation, who are supportive, cordial and cooperative during my field visit, FGD and interview. Last but not the least, thanks to my mentors, teachers and TFB Cohort who are always been with me and inspire to complete this thesis work.

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List of Acronyms

a2i	Access to Information
BBC	British Broadcasting Company
BDU	Bangabandhu Sheikh Mujibur Rahman Digital University
B.Ed.	Bachelor of Education
BOU	Bangladesh Open University
B.Sc.	Bachelor of Science
CD-ROM	Compact Disk Read Only Memory
CUSPI	Curtin University Sustainability Policy Institute
DPE	Department of Primary Education
FGD	Focus Group Discussion
GIU	Governance Innovation Unit
HSC	Higher Secondary School Certificate
IOM	International Organization for Migration
JSC	Junior School Certificate
MOOC	Massive Open Online Courses
MoU	Memorandum of Understanding
NCTB	National Curriculum & Textbook Board
NIEMT	National Institute of Media and Technology for Education

PSC	Primary School Certificate
R & D	Research and Development
SDG	Sustainable Development Goals
SSC	Secondary School Certificate
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund

Glossary

- Thesis:** An extended research paper that is part of the final exam process for a graduate degree. The document may also be classified as a project or collection of extended essays.
- Skype:** Skype is a proprietary telecommunications application that specializes in providing video chat and voice calls between computers, tablets, mobile devices, the Xbox One console, and smart watches over the Internet. Skype also provides instant messaging services. Users may transmit text, video, audio and images. Skype allows video conference calls.
- WebEx:** Cisco WebEx is an American company that develops and sells web conferencing and videoconferencing applications. It was founded as WebEx in 1995 and taken over by Cisco Systems.

Chapter 1

Introduction and Background

1.1 Introduction

When entire Bangladesh is suffering from inadequacy of quality primary school teacher, Jaago Foundation, at that grave moment has introduced the idea of ‘online school’ system for providing quality education with quality teacher. The continuity of the teaching-learning process (TLP), the school climate, and children's learning achievements are all major challenges in Bangladesh. Bad credentials and a lack of motivation on the part of the teachers are major obstacles. In government primary schools and registered non-government primary schools, about 24% of teachers are untrained (UNICEF, 2009). This is why; online school is in the list of dire need to provide quality education in rural and suburban areas through quality teacher and in online means.

In the National Education Policy 2010 of Bangladesh emphasizes the ICT education. It undoubtedly states in the National Education Policy 2010, “To attach substantial importance to information and technology (ICT) along with math, science, and English in order to build up a digital Bangladesh based on knowledge-orientation and cultivation of ICT” (MoE, 2010, p.9). The policy also highlights the need for ICT literate masses starting from primary level (MoE, 2010, p.24). With the assistance of UNDP and USAID, the Office of the Prime Minister took a step towards achieving the objective of building a digital Bangladesh by launching the Access to Information (a2i) initiative. The primary educational aim of this venture is to use ICT to make teaching and learning more fruitful. At its inception, 500 government schools have been fitted with a multimedia classroom, which is a classroom with an internet-connected laptop and a multimedia projector. These tools are used by teachers to

identify and provide their students with digital content from the Internet to illustrate concepts relevant to their subjects (a2i, 2011).

Bangladesh is working to incorporate ICT into the education sector to enhance the experience of learning (a2i, 2011). In her book, Bender (2003) mentions, “I think that commitment to learning can take place without a physical setting, and certainly the online class can be effective as a virtual place to disseminate, collect and exchange knowledge and idea” (p.7). In this research the first online school in Bangladesh founded by Jaago Foundation is chosen to explore quality in education through technology. This research takes an in depth look in to the operation, teaching-learning process, institutional capacities, technology, curriculum and teacher’s recruitment and training being practiced in the Jaago Online School. Research is conducted at Jaago online schools at Rayer bazar Dhaka, Rangpur Jaago Online School and Dinajpur Online School. Research participants are from Jaago Online schools personnel such as Research and Development manager, Education Coordinator, Online School Teachers and students.

1.2 Research Topic

Technology has become the key component of today's everyday life. Around the world, the introduction of learning technology into school classrooms is being facilitated and funded. Promotion and aid are focused on claims that effective integration would contribute to improved learning outcomes (DoE, 1998). The future is about access, learning and cooperation everywhere, both locally and globally. It is likely to be social to teach and learn. School systems of the future may include a typical cohort of students, as well as only students living around the nation or even the world online (Britland, 2003). Bangladesh is seeking to integrate ICT in the education sector to enhance the process of learning (a2i, 2011). In an article of Shanghai Daily mentioned about Online schools, “Education is the backbone of a

nation. Unfortunately, there is a clear divide in the quality of education in our rural and urban educational institutions due to a lack of skilled teachers and educational resources. Our online schools are not intended to replace traditional schools, but rather to connect skilled teachers and resources with rural students who desperately need them, through the power of technology, so that the quality of education is available for all- even children living in a remote corner of Bangladesh for whom learning in a structured environment was once a mere pipe of dream” (Shanghaidaily.com, 2014). In context of Bangladesh to examine quality of education through technology Jaago Online School is the evident selection. Jaago's "Online School" foundation began as a pilot project with 80 students in 2011 in Gazipur. The concept of online schooling and instantaneous learning through the internet soon proved to be a leap towards an educational revolution, especially in the context of Bangladesh, as the country had not seen before this method of schooling. The Jaago Foundation currently runs 8 online schools in various parts of Bangladesh (Jaago, 2020). They work on the sustainable development of economically insolvent societies (Jaago, 2020). The chair person and founder, Mr. Korovi Rakshand initially started the schools to allow children from underprivileged or poor backgrounds an opportunity to enter mainstream education. Hence this research topic has been chosen to scrutinize the structure of online education present in Bangladesh and how this online education through technology will be able to enhance quality of education.

I conducted this research to see how Jaago online schools using technology for effective learning and wanted to find out how they are overcoming the shortcomings they have regarding technical support and challenges they face in the online teaching learning process. I also attempted to find out their views regarding what is working and what is not in those schools and tried find out about their policies, trainings, materials and practices about online classrooms.

1.3 Statement of the Problem

Since its birth, Bangladesh has been working on quality primary education and has brought major improvements to the learning environment, school attendance and many other things in the last 20 years (Ardt et al., 2005). Instead of motivating the students to drill and rote memorization, the implementation of PECE (Primary Education Completion Examination) or PSC and JSC does not enhance education quality at the same time. Students have no ability to grasp the material or have the opportunity to create something on their own. The validity of these tests has been challenged by education experts, scholars, intelligent people, teachers and guardians (The Independent, 2018). For Bangladesh, the shortage of quality teachers, the inadequacy of digital material and digital content as well as digital or multimedia classrooms for quality education is still a nightmare (Ardt et al., 2005). A report of DPE study reveals that approximately 70% of children are unable to read or write correctly or perform simple mathematical calculations even after five years of primary school (Daily Star, 2014). The UN General Assembly adopted the 2030 Plan for Sustainable Development on 25 September 2015. (UN, 2015). The 17 Sustainable Development Goals are essential to the 2030 Agenda (SDGs). Of the 17 targets, one of the main objectives to be accomplished is the standard of education. UNESCO Director-General Irina Bokova said that education has a critical effect in meeting the challenges and ambitions of the 21st century and cultivating the right kinds of values and skills that will contribute to sustainable and inclusive goals and peaceful life together. (UNESCO, 2017). The relationship between the Governance Innovation Unit (GIU) represented by the Curtin University Sustainability Policy Institute (CUSPI) and the Government of Bangladesh was formalized by a Memorandum of Understanding (MoU) signed in August 2015 to accelerate the implementation of the Sustainable Development Target by 2030 (Sustainable development knowledge platform, n.d). But Bangladesh needs to take part in the Sustainable Development Goal by combining information and technology

with quality in education; in that case, it still struggles in the back rows (Yoshikawa, 2014). Life in a growing socio-technical environment, locally-informed and context-appropriate science and technology applications are vital to certifying the long-term resilience of advancement efforts and the implementation of the 2030 Scheme and the Sustainable Development Goals are key to technology and innovation (SDGs) (ECOSOC, 2017). In this unstable situation to cope with the race, what exactly Bangladesh requires to do, Jaago Foundation online school is doing that excellent work through technology.

1.4 Research Questions

The study posits out the answer of the following research questions:

1. What are the innovative initiatives found for the development of quality of education through technology in Jaago Online School?
2. How incorporation of technology enhances the quality of education in Jaago Online School?

1.5 Purpose of the Study

This study aims at finding out changes that happened due to the integration of technology in education sector of Bangladesh. The study evolves in the light of ‘JAAGO Foundation Online School, which is operating in various parts of the country and adopted modern technologies in the pedagogy.

Being established in 2009, JAAGO Foundation School, with some particular goals and purposes, has set up a definite objective for their education program– “To break the cycle of poverty through education and rebuilding our nation”. The JAAGO Foundation works to set up cost-free international standard schools in every district of the country. (Jaago

Foundation, 2017). This study seeks to connect technology towards quality of education which is core phenomenon to attain Sustainable Development Goals (SDGs) as well as towards eradication of educational inequity from urban to rural and manifest a legitimate atmosphere for learning. This study will also intended to explore how Jaago Foundation Online school providing quality of education in Bangladesh by studying and analyzing their vision, objectives, online teaching learning process, curriculum, learning materials, technological equipment, teacher training, background of the teacher and students of the online school. This study is needed due to diverse reasons. In their report, Moore and Kearsley (2012) described the following reasons for improving access to education and training as a matter of equity, creating opportunities for workforce skills to be updated, improving the cost-effectiveness of educational services, improving the efficiency of current educational systems, improving the ability of the education system, balancing differences between age groups, providing relevant target audiences with educational campaigns, providing emergency training for key target areas, expanding educational ability in new subject areas, balancing education with work and family life and introducing an international dimension to the educational experience.

1.6 Significance of the Study

The idea of the Jaago Foundation Online School is wholly unique (Jaago, 2020). This is one of the great ideations and executions, done by Korvi Rakshand, a well reputed Bangladeshi Entrepreneur, and the outcome of this online school needs to be explored. This particular study will help other researchers and entrepreneurs to think it in their context in more dynamic way. On the other hand, the countries which have poor socio-economic background and can't provide education to all or to the students of the remote village area, the idea will help them to develop and promote this particular project and do research in their context.

A pilot project, Moheshkhali, has been carried out by the Government of Bangladesh with Jaago Foundation in this particular region. The government runs 10 primary schools in Moheshkhali and aims to disseminate this schooling system in the other region of Bangladesh. This could be a model for other countries in South Asia as well. In this scenario, for many to conduct online school program, this research can be food for thought (Jaago, 2020).

Chapter 2

Literature Review

This literature review is a collation of the recent literature available on online education, technology and quality of education gathered from different books, journals, online journals, reports, newspaper, websites and articles. It was prepared as an effort to understand the research topic and further investigation and deepening the comprehending of the online school and so on. It is to be noted that online education is not an area which has been explored well before, therefore finding reliable and relevant sources of information was quite difficult.

2.1 Definition of Quality education

. The phrase quality education is so seemingly straightforward and understandable that one may question the need for definition. However, a review of the literature finds that in the past, quality education was not always clearly defined. Roy Edelfelt (1971) stated that quality of education is typically defined as formal training in different fields of knowledge or specific abilities, mainly mental or mental/motor skills. On the other hand Peter (1994) identifies Knowledge is a key tool for defining the quality of education when it is not linked to any nation. It's just portable. It can be created, quickly and cheaply, everywhere. Finally, by definition, it is shifting. Knowledge knows no limits. There is no international knowledge and no domestic knowledge. Only knowledge exists. Bob Reising (1995) argued on that and added that to be simplistic, even asinine, knowledge is the totality of quality education. Yet it is to be naïve to minimize its centrality. In the twenty-first century, a period of time that is certain to feature technology, speed, and efficiency, knowledge promises to be a precious

commodity in a constantly changing form, from which our students will only benefit if they learn and experience communication, teamwork, and problem solving (Reising, 1995).

In common parlance, the term 'quality of education' has a presence of uncertainty. There are any definitions beneath the light. Many theories and terms have been used interchangeably, such as efficiency, effectiveness, equity and quality. (Adams, 1993).

Considering diverse definition and dimensions, under the lance of UNICEF, quality of education includes:

Healthy, well-nourished and ready to engage and learn, and supported by their families and communities in learning;

Good, secure, protective and gender-sensitive environments, and sufficient services and facilities;

Content that is expressed in applicable curricula and basic skills acquisition materials, in particular in the areas of literacy, numeracy and life skills, and awareness in areas such as gender, health, nutrition, prevention of HIV/AIDS and peace;

Processes in which educated teachers use child-centered teaching strategies and skillful evaluation in well-managed classrooms and schools to promote learning and minimize inequalities;

Outcomes that include awareness, skills and behaviors, and are related to national targets for education and positive social engagement.

2.2 Evolution of Online Education

Online education evolves from distance education. Zigerell has stated that Distance education is a type of education distinguished by the physical separation of teachers from students, with the exception of some projects enabling occasional face-to-face meetings (Zigerell J, 1984). Distance education has long been renowned for its divergence from the situations where naturally teaching and learning take place. Distance learning is a pedagogical oddity to some degree, often requiring more explanation, such as extending educational opportunities or encouraging life-long learning (Larreamendy-Joerns & Leinhardt, 2006, P. 570). Faure at al (1973), who commenced the concept of distance education, envisions a lifelong learning system as one that will be accessible throughout the life of an individual; adapting to the needs of each individual to meet the demands of contemporary society; engaging learners in guiding and directing their own learning; and promoting learning from a range of formal and non-formal sources. The increasing influence of distance learning has thus altered the formal education paradigm (Larreamendy-Joerns & Leinhardt, 2006, P. 571).

Scholars debate the exact origins of distance education (Holmberg, 1986; Keegan, 1990). Anna Eliot Ticknor's Society to Encourage Studies at Home was one of the first significant experiences of distance education (Agassiz, 1971; Bergmann, 2001). The British Open University (BOU) is the most successful distance education model and is the system accepted globally as a model program. BOU began as an idea for a "university of the air" designed to deliver higher education courses to technicians and technologists via mass communication. But it quickly became a university advertising "a second chance for all adults who left school at 16 or earlier and were denied entrance to careers and professions limited to graduates of traditional universities as a result. The current British Open University launched in 1971 and now provides adults with a method by which a first-class degree can be obtained. The Open

University is the most popular distance learning institution in the world, incorporating the best aspects of correspondence research with specially prepared films and broadcast tapes by the BBC and in the history of education, and possibly the most significant breakthrough since the formation of the land grant colleges. About 17,000 and 20,000 students each year¹⁸ are taught in a number of formats, including radio, TV, and audio and video cassettes. (Faibisoff & Willis, 1987, P. 226).

Back in 1956, with 200 radio receivers for educational institutions, distance education in Bangladesh began. Audio-Visual Cell, which was upgraded to the Audio-Visual Education Centre in 1962, was established at the time. Bangladesh faced the task of fulfilling the educational needs of the masses after Independence. The need for a new mode of education has been widely felt in order to meet this challenge. The School Broadcasting Pilot Project was introduced in 1978 as a sequel to that feeling. The project was transformed in 1983 into the National Institute of Media and Technology for Education (NIEMT). The Bachelor of Education (B.Ed) program was offered in remote mode by BIDE as part of the development of audio-visual materials. And Bangladesh Open University was founded back in 1992 in successive processes (BOU, 2006).

Three forms of service delivery categorize distance education: conventional distance education, computer-based education, and online education. Traditional distance education through the postal service uses audio- and videotapes or paper-based materials. Computer-based training is based on hard drive or CD-ROM content. When computer-based education is provided via the World Wide Web, distance education can be regarded as online education (Kim, 2004).

2.3 Online Education

The development and dispersal of technology has contributed to an increase in the prospect of online education. The growth of technology has contributed to a remarkable rise in the promotion of online education programs by educational institutions (Allen & Seaman, 2007). Khan (2005) defines online education, using the internet as the platform, is a revolutionary tool for providing education to distant learners. Alley (2004) stresses the use of the internet for accessing information, learning materials, and help throughout the learning process, learning progress and learning growth to describe online education. Training online has a different name. Some of them are: interactive education, Internet-based training, web-based education, and computer-mediated communication education. (Paulsen, 2002).

These two classifications of learning in online education are asynchronous and synchronous. Asynchronous online education does not apply to any real-time contact between teacher and student. Students will finish an online course on their own timetable and time. Synchronous online education, on the other hand, takes place when geographically dispersed students and teachers use communication technologies such as digital audio, digital video and text-based messaging software to interact in real time. (Martinez, 2004). In academic programmes, synchronous education is more common than in training programs. (Kim, 2004). Online education is developing rapidly due to technological growth. Innovative software has enabled smooth and fast communication features, providing more advanced and rich interaction, and is increasingly imperative in determining learning efficiency and student satisfaction. (Gold, 2004).

Gary Thomas (1986) stressed improvements from the conventional schooling method to the embrace of creativity and positivity, arguing that technology allows individuals more control and decreases the large organization by revealing the flaws inherent in its structure; the

rationale of child-centered education will become apparent as it becomes more individual-centered. As one of those responsible for moving the emphasis to a more phenomenological rooted view of the processes involved in the social sciences, Heidegger (1979) made it very clear that there is no point for or against technology. It is important to live with technology. Independent of our rejection, it continues. In his need now to fashion a suitable coat-hanger for his epistemology, Heidegger's ideas have particular relevance to education.

2.4 Role of technology for online education

Technology is becoming an integral part of the lives of children and for educational teaching and learning, too. As personal as breathing, it has become (Prensky, 2004). This is one of the reasons why technology, particularly in primary education, has a constructive effect on learning, whatever the context it refers to. (Badia, Meneses, Sigales, & Fabregues, 2014). But many don't agree with this. DeLoatch (2015) argues that technology is changing the way kids think and putting privacy and protection at risk. But the most significant findings have come from the study of Frydrychova Klimova (2012). In her research, Frydrychova Klimova (2012) presents many advantages of using learning technology, which is also true for elementary education. Klimova argues that learning by technology concentrates on the learner rather than the teacher. She also found that through technology, learning becomes more personalized and becomes more autonomous on the one hand, more collaborative and engaging on the other. Her results also demonstrate that technical learning can take place at any place and at any time and become enriched with more up-to-date resources that can be adapted to the immediate needs of students.

Smeets (2005) gives more emphasis on ICT. He demands that the use of technology adds to the power of the learning process, benefiting both teachers and students from technology. It

is a reality that technology decreases the overload of teachers as the contents of the subject matter are visualized using technology students. On the other hand, as students envision the material of digital technology from the classroom, learning becomes resilient. Likewise, the processing of knowledge to improve connectivity through the advancement of computer technology has created its capacity for education (Voogt & Knezek, nd). The influence ICT can have in teaching and learning processes is verified by literature. (Fonkoua, 2006; newhouse, 2002). It has been proposed that the use of technology in schools will also train students to be more productive people in increasingly open and democratic societies (John & Sutherland, 2004). West and Central African research indicates that ICT curriculum for teaching and learning in schools can be subsidized to establish a more child-centered approach to pedagogy (Harrison, 2005). In any learning process, teachers with pedagogical expertise who are ready and able to transfer information and help students to develop knowledge would typically make a difference. In this era of ICT and its introduction into the educational system, the role of the teacher should not be ignored or underestimated, as in the traditional classroom setting (Boakye and Banini, 2017). Thus, in both education policy and science, there is a global movement to consider the need to reform education from conventional teaching and learning paradigms into more innovative modes of pedagogical practice. Concepts such as information or knowledge culture, evolving pedagogy and skills of the 21st century also define these fields of practice and change (Ottestad, 2010). In the conventional teaching approach, student - teacher contact is a crucial activity when teachers play a central role. Students play a central role in the blended learning environment, and teacher-student contact becomes more versatile in several different ways (Kang & Im, 2013). Interactive teacher-student experiences have an effect on student learning outcomes when introducing learning activities such as learning assistance and social intimacy, contact and teaching Q&A, involvement of teachers, instructional support (Liu, 2016). Online learning

offers a potential environment that enables students to learn effectively by developing the participation of teaching, cognitive, and learners. The presence of teaching is essential to cognitive and social steadiness. (Garrison et al. 2000).

2.5 Present status of online education in Bangladesh

Digital Bangladesh is an integral part of the government's Vision 2021, which, through its golden jubilee of independence, promises Bangladesh a well-off and equitable middle income (Islam & Gronlund, 2011). That is why the importance of ICT education in Bangladesh's 2010 national education policy has been greatly emphasized. At the same time, it stresses the expansion at all levels of the use of information and communication technology that is instrumental in the education process (MoE, 2010, p. 13).

The Access to Information (a2i) Initiative, a PMO follow-up project, was launched in 2007 with the stated objective of leveraging ICT in public service delivery and building the stakeholders' required capacity to facilitate the use of ICT in development. This project is funded by the UNDP. The primary objective of this project is to ensure that all Bangladeshi people have easy, affordable and secure access to quality public services. This project has taken numerous initiatives in the education field, such as teacher portal to multimedia classrooms, content production, to implement this objective. (a2i, 2011).

BOU is a revolutionary name for distance education in Bangladesh. To encourage distance education, this university was founded in 1992. The university had previously only used national television, radio and its regional centers to hold the lessons. Today, updated digital technology and online services are also used by the university. Formal and non-formal services are offered by BOU. BOU has already launched 43 formal and 19 Non -formal programs. There are four types of formal programs: certificate, diploma, degree, and Masters. From regional centers, students may collect materials. In addition, BOU offers numerous

online research materials and conducts radio and television programs. For structured academic programs for each semester, BOU conducts tests every six months. On the other hand, for non-formal services, BOU does not perform any tests. Non-formal services are primarily intended to inform millions of people about contemporary and workable agricultural methods, poultry farming, health and nutrition, conservation of the environment, etc. (BOU, n.d.)

Among different online education intervention, the daily star, one of the leading newspapers in Bangladesh, launched a website called champs21.com in 2010 to help students taking self-assessment (champs21, 2010). Another intervention of online education is arranged by British Council named Connecting Classrooms. Students and teachers both are facilitated from this course; they use to learn about different aspects of global disputes from blended online resources (British council, 2013). BBC Janala (<http://www.bbcjanala.com>), a website run by the BBC, has long been involved in the area of online language teaching. Even today, with the expectation that at least 2.5 crore people in Bangladesh will be able to speak in conversational English, they offer 3-step English learning courses. BBC Media Action has been carrying out this initiative with the financing of the UK government and under the 'English in Action' project. For any Bangladeshi who is willing to learn English online, these courses are completely free.

The Agami Foundation, along with the Khan Academy, is taking up another online education project. Khan Academy provides practice activities, instructional videos and a customizable learning dashboard to allow learners to study in and outside the classroom at their own pace (Khan Academy, 2014). The educational content of the Khan Academy has been translated into 36 foreign languages and the Agami Foundation translates in Bangladesh and combines the content with the national education curriculum to be used by Bangladeshi students. (Agami, 2013). BDU is Bangladesh's first-ever fully digital public university. In order to

facilitate online, distance and virtual learning in Bangladesh, the university was established. This university has offered two 4-year bachelor courses in 2019 for the first time: BSc in ICT in Education and BSc in the Internet of Things. For the programs, only students with a science background can apply (Bangabandhu Sheikh Mujibur Rahman Digital University, Bangladesh, n.d.). The university has a MOOC as well (Massive Open Online Courses Platform). The university will deliver many online courses to a large number of learners through this website. For the time being, only one online course named 'Digital Learning Design' is being offered by the university. For the supplies and certificate, the course costs just Taka 200. (Bangabandhu Sheikh Mujibur Rahman Digital University, Bangladesh, n.d.).

Under the a2i, Muktopaath is a government project (access to information). Individuals and organizations can offer courses under this platform. There are 75 ongoing courses actually. Some of them are free, and some of them are paid for. For some of the courses, students will receive a certificate. Courses include technique for studying, teaching, administration, housekeeping, ICT, agriculture, language, journalism, and so on (Muktopaath, n.d.). The largest Bangladeshi platform for online and distance learning is 10 Minute School. A Bangladeshi student, Ayman Sadiq, founded this online school in 2015. There are both academic and technical courses on this site. This website has gained broad prominence due to its innovativeness in content creation and has archived many national and international recognitions. The 10 Minute School is sponsored by Robi Axiata Limited and the Bangladesh Ministry of Education. Although the courses are free, upon completion of the courses, there is no certificate issued (10 Minute School, n.d.). Shikkhok.com is a free and open learning platform set up in 2012 by Dr Ragib Hasan, a Bangladeshi computer scientist and academician. In this forum, a student or an instructor may be individuals. All the courses are cost-free. For the courses, no certificate is issued. ICT, technology, and a variety of academic and non-academic topics are the subjects of the courses. (Shikkhok.com, n.d.).

Light of Hope is another organizer who started their operation to improve quality education, especially in Bangladesh's primary education. They have numerous ventures, including Sputnique and Goofi, two projects focusing on distance education or technology-based education. One of their solutions for technology-based education is Sputnique, the solar-run school in a backpack, and Goofi is their international online forum for content on future skills for children. Their material is used by parents and school teachers around the world for their children and students. (Light of Hope, n.d.).

The Jaago Foundation has a unique program for online education. They provide English-language online education for underprivileged learners. The concept of online schooling in Bangladesh's formal education system was introduced by the Jaago Foundation to bridge the quality gap in education by linking trained teachers and services with underprivileged students living in remote areas through ICT tools and technology (Jaago, 2011).

Chapter 3

Methodology

3.1 Research approach

Since I wanted to explore the initiative for the enhancement of teaching learning process using the technologies in classroom of Jaago Foundation Online Schools; therefore, this distinctly qualitative approach to study is rooted in the thorough interpretation of the text of the interview and focused on wider contextualization. Students are from diverse backgrounds, and teachers have distinct prestige that affects the whole process. Qualitative research is particularly suitable for the investigation of processes (Walker, 1985a; Welters, 1977). The qualitative approach focuses primarily on clarity, perception and, to some extent, on description. (Heyink & Tymstra, 1993). In the qualitative research method, there are six steps: the identification of a subject or problem to be studied, the examination of the subject-related literature, the selection of research participants, the collection of data related to the subject, the analysis and interpretation of the data and, finally, the creation of a narrative to explain the study results (Gay & Airasian, 2003). To get insights into the function of school, mechanism of school, in the process how technology plays its role, it is necessary to carry out the study and observe this teaching learning process in a school setting. Thus, it is possible to record and analyze the scrutiny and experiences of teaching learning process through technology. This study, therefore, adopted a qualitative approach.

3.2 Research sites

Bangladesh is working to incorporate ICT into the education sector to enhance the experience of learning. (a2i, 2011). Jaago Online School is the obvious selection in Bangladesh to investigate the standard of education through technology. Jaago's "Online School" foundation began as a pilot project with 80 students in 2011 in Gazipur. The concept of online schooling

and synchronous learning through the internet soon proved to be a leap towards an educational revolution, especially in the context of Bangladesh, as the country had not previously experienced this method of schooling. The Jaago Foundation currently runs 12 online schools in various parts of Bangladesh (Jaago Foundation, 2017). For research purpose, Jaago Foundation Online School Head Office at Rayer Bazar, Dhaka was chosen as the research site. To conduct the interview with Education coordinator, R & D manager, teachers are needed whom easily are available here. And for the observation, as all the classes are taken from this online school Head office, Dinajpur and Rangpur Branch, so it will be legislated and comfortable to observe the teaching learning process from here too.

3.3 Research participants

For data collection, I used 3 tools. I have done in-depth interview, Focused Group Discussion (FGD), and Observation. I interviewed 2 people – one Education Coordinator, one Research and Development (R & D) manager. Education Coordinator is responsible person for each online school from teaching learning process to administrative work to distribution of task to student's quality improvement through online teaching. This Education Coordinator is pivotal stakeholder for the interview. Research development manager manage the curriculum, material and technological equipment's improvement for the whole online schooling and solely responsible to develop the facilities of the teachers and students and maintain the school infrastructure and water and sanitation. I have conducted 1 FGD with online school teachers in the main branch of Rayer Bazaar directly in their office room. I have observed online classrooms and online teachers' rooms and classroom materials. I also observed what sort of technological equipment Jaago Foundation schools are using and how they are using. I observed the teaching learning process as well in the capacity of visiting those places. What

kind of library the students are using, whether students are using any computer lab or not, if yes, what sort of digital content the students read in the lab or in the library, were my focus during the observation.

3.4 Sampling Procedure

The study by Rossman & Rallis (as cited in Mahmud, 2018) aimed at the sampling process of research participants in this study because, given that this was a qualitative research study, there were reasons why I chose to select particular participants in the research. I choose JAAGO Foundation online schools because they have unique approach to teach online in remote areas where people do not have any access to education, and it add values and importance to new approaches to education (Suri, 2011). I have chosen Research and development manager and Education Coordinator for interview due to have their close and intensive role in regards of teaching learning process management, directing it for the whole year and set the goal for the organization. I have chosen online school teachers for FGD because of their classroom experience, connectivity with students, technologies they are using regularly, curriculum they are facilitating, methods and management of online education they are experiencing.

3.5 Data Collection Methods

Qualitative researchers mainly collect data from interviews (semi-structured or unstructured), focus groups, findings, or documents from the analysis by Heyink, & Tymstra (as cited in Mahmud, 2018). Their data analysis is primarily inductive, allowing interpretation to emerge from the data rather than the hypothesis-centered, more deductive method preferred by quantitative science. (Heyink, & Tymstra, 1993). So, I have used different qualitative data collection methods, such as Interviews, Focus Group Discussions (FGDs) and observations.

3.5.1 Interviews

Interviews are particularly critical for getting the story behind the experiences of the interviewer. The interviewer should seek knowledge about the subject in depth. Useful interview as a follow-up to such questionnaire respondents to further examine their answers (Mcnamara, 1999). Since semi-structured interviews emphasize greater generality, versatility in questionnaire formulation may also depart from any timetable or guide during interviews, any question that interviewers respond to can be asked. (Berg, 1995), as a result it helped to get rich and detailed useful answers and effective to conduct this research and different participants varies from one to another thus these interviews explored the in-depth insights of the participants.

I took a method of interview, where I included a collection of broad topics to explore and confer with participants, but I was prepared to address any relevant new topics that participants began with (Kuper, et al., 2008). I avoided closed-ended questions and did not fix the order of the questions and the extent to which topics were to be discussed and did not regulate the interviews. I recorded the interviews using a voice recorder in my cell phone with prior permission from the participants.

3.5.2 Focus group discussions

FGD encourages contributors to agree or disagree with each other such that it offers an imminent understanding of how a group feels about an issue, the choice of opinions and feelings, and the difference and disparity in terms of perspective and their understanding and practice in a specific culture. (Freitas, 1998).²² By sitting down with several teachers from the Jaago Foundation Online School, I noticed strong differences in external frameworks and internal structures as teachers engaged in discussions with me and each other, and FGD offered the opportunity to explore the programs, dig up the necessary details and data

conducting the (Giddens, 1984). I have conducted the FGD with 8 teachers of Jaago Online School face to face and taking note by myself. I recorded the conversation using my cell phone with prior permission from the participants here as well.

3.5.3 Observations

The systematic method of documenting people's behavioral behaviors is observation. Objects and phenomena as observed in the natural world (Lindloff & Taylor, 1995). Non-participant observation plays a vital role in gaining access to and studying school leaders in real-life environments to advance research on school leadership. In order to overcome inconsistencies between what people say and what they do, observational evidence is very beneficial and may help to reveal actions that the participants themselves may not be aware of. (Brikci, 2007). It helped me to gather sufficient data about working environment, interactions, infrastructure, language, teaching-learning process, administrative process etc. I also observed the other areas of schools like playgrounds, classroom facilities, lab rooms etc. for about three hours. I had an observation checklist in the field for taking notes during the observation. I cleaned up field notes later to make the difference between my observations and my own interpretations.

3.6 Role of the Researcher

The researcher is a student who develops knowledge of the subject through questions posed, contexts studied and his own personal biography (Rossman & Rallis, 2003). Because qualitative research is interpretative research, where the researcher makes sense of what he knows, it is necessary to share my past experiences, my prejudices and personal interests with me, the researcher in this case (Brinkmann & Kvale, 2005). My experience as a teacher in

one of the research sites, has made me realize the importance of the utilization of technology when it comes to teaching and learning. It is necessary to embrace that bias occurs when I communicate with participants in the field interactions and therefore I would like to be clear about my own biases (Anne, 2000). I am biased because I was a Jaago school teacher and used technology for my own classrooms where I learned about how technology can enhance learning process. From that I develop a bias that appropriate utilization of technology in the classroom and school can bring about positive change in education and experiences of the students and teachers. I was biased to the belief that learning does not only take place in the classrooms but outside the schools as well and online platform can change that. I was also biased to the belief that there were limitations using technology based online classrooms. In Bangladesh blending technology and facilities for technologies are difficult. Equipment and apps are still to be figure out for the best utilization of online classroom and at the same time facilities of broadband internet or any internet connection not providing quality bandwidth all over Bangladesh. These biases were the reasons why I was personally vested in collecting and analyzing the data of this study. I have been systematic in completing every step of the research and logical in the progression. Being systematic and rational means conforming to the agreed research procedure principles that I have tried to follow (Depoy & Gitlin, 2005).

3.7 Data Analysis

The method of data analysis includes organizing interviews, FGD, checklists of findings, field notes and other materials and organizing the details into groups and themes and writing them all up so that readers can understand what I have learned. (Kuula, 2000).

After I collected the data from interviews and FGD, I transcribed them and translated them. As for observations, I wrote the data from my check lists. Then, I organized data according to the research questions, which provided me more relevance to analysis data and the coding of

data into these broad categories based on the literatures (Kitchens, 1998). Once the data was organized and presented into categories and themes, I interpreted the data considering the literature review. This interpretation has written in the “Discussion” section, where I tried to share with the reader what I understood from the findings.

3.8 Ethical Issues and Concerns

One of the core elements for me in this qualitative research was to ensure ethical matters and to preserve confidentiality and build trustworthiness (Drisko, 2008). For interviews, signed consent was taken from participants and verbal consent was taken during the FGD which are still recorded in the recorder. They were all made aware that they were being recorded, but their actual names will not be used in the report. As the sessions proceeded, I was aware that I did not enforce my own beliefs or biases onto the participants by ensuring that the questions asked were not leading, but open-ended and I ensured that I behaved professionally with the participants.

3.9 Credibility and Rigor

My teaching experience for two years and as a student of a master’s at BRAC IED and studying several courses related to research methodology has helped me to understand the theoretical concepts and the methodologies required to conduct this study. My teaching skills helped me to convey better with the students to understand their view. To ensure rigor of this study, I developed research proposal and a research framework and done a literature review with more relevant info. In my research proposal I planned the data collection process and after collection, how data will be triangulated through the different data collection methods: FGDs and interviews with different stakeholders and observations. Also, I have spent time at the Jaago foundation online Schools and discussed my work and methodologies with

colleagues, critical friends and faculty members especially with my thesis supervisor, without compromising confidentiality agreements, are also part of ensuring rigor (Putnam, 1990).

By integrating multiple theories, approaches, experiential materials researchers may hope to resolve the weakness or intrinsic biases and the problems that come from single method, single-observer and single theory studies (Jakob K., Alexander S., 2001). The three techniques interview, FGD and observation are accommodated to this research for triangulation. Triangulation techniques are helpful for cross checking and used to provide confirmation and completeness, which brings balance between two or more research techniques. It has to be noted here that data has been collected in middle of 2019. After that pandemic of COVID 19 broke out and the whole world has been experiencing a completely different situation. The entire education system is reconstructed during pandemic and each level of mainstream education introduced online education to minimize the learning gaps of the students. As the data collected before pandemic, data during this period and methods or online education structure is not taken into consideration in this study.

3.10 Limitations of the study

There are several limitations in this study for me because I am very new at qualitative research and it was a challenge for me to overcome those limitations. Firstly, I am not experienced at taking a long interview, so it was difficult for me to stay on track and control the conversation. So, for that I piloted some interviews with friends before my final interviews which helped to collect data properly. Another limitation was that conducting FGDs and collecting data. Because it was an online school teacher's timing are different than regular school. So, I had to convince the Education Coordinator to a make schedule to conduct the FGD and during the FGD maintaining and controlling the narrative was

challenging. Another limitation was the time of collecting data and interpret and analysis them. Because I work outside Dhaka and for that doing all these was challenging without overlapping my work and this research and focus properly. At the same time, data has been collected in the middle of 2019 and completed the thesis work in 2021. A good interval has taken place and Covid 19 pandemic has been started in the meantime. In the neo normal situation, education system becomes dependent on online. When I started the research work and collected data, it was one of the unique online education models. However, as the data collected before this pandemic, hence online education of pandemic situation and its process is not described here.

Chapter 4

Results

In this chapter, the results of the research on “Jaago Online School: Exploring the Initiatives to Enhance the Quality of Education through Technology” has been presented. The data was collected through an FGD, in depth interviews, classroom observations, and documents review. The study was guided by the two strategic questions and sub questions under it. The data has been presented through themes and few sub themes.

4.1 Jaago Foundation and its online education program

Jaago Foundation’s online education program is a unique program in the formal education system of Bangladesh. Though Govt. has taken many initiatives by his a2i’s program to promote technology in the education system of Bangladesh, but Jaago Foundation significantly prove their worthiness and credibility through their online education program in the current context of educational system where government move forward to establish their agenda of Digital Bangladesh (Interview# 1, 28/06/2019).

4.1.1 Starting of online school at Jaago Foundation

During the FGD one participant told me that he believes our country is going for digitalization and for that our education system needs to be digitalized. So Jaago is going to that direction, I guess. It is not possible to fully digitalized, but we can ensure that we create a path so that other can follow and improve the situation (FGD# 01, 03/07/2019). Another participant shared with me that how he feels about the necessity of online school in context of Bangladesh. Initially Jaago Foundation started in Rayer Bazar with physical school and goal was to teach in English version. Then found a donor who build a school in Gazipur. When school was started there but after some time, we realized that we do not have enough good

quality teachers there to support our English based teaching. So, we come up with that skype can be explored to teach our kids there from our Dhaka office because we have more good quality English version teachers here. So, we also had negotiation going on Grameenphone that time. They wanted to invest in our education program and then we gave them this online school idea and they accepted it and that's how online school started. The piloting was started in 2010-2011 (Interview# 1, 28/06/2019).

4.1.2 Support from the Government to develop the program

According to a participant they feel that as an organization they did not face that many challenges from government side rather they got the friendly support and encouragement from the government. The minister of ICT department from People's Republic of Bangladesh Mr. Palak Sir visited these online schools. Government has an agenda of digital Bangladesh. ICT minister mentioned that Jaago foundation online school is one of the exemplary of digitalization of Bangladesh. Recently Jaago have started a project with Government and IOM to teach about 200 government primary schools at Moheskhali through online schooling system (Interview#2, 01/07/2019). Education Coordinator informed me, "Online school model is effective but also expensive and that is why we are trying to collaborate with government to implement this model and improve it for effective learning (Interview# 1, 28/06/2019).

4.1.3 Integrating the vision of the Jaago Foundation in online schools

One responder said to me that we all know the vision of Jaago Foundation that breaking the cycle of poverty through education and ensuring quality teaching to all rural areas. There is a big gap of quality teachers and the standard at the same time not high in the rural areas. As Jaago intensively working on English language and its instruction but in the remote areas there is a shortage of quality English teacher (Interview#2, 01/07/2019). Another participants

shared regarding this, “Online school provide opportunity to create materials for students very intuitive way so that every student can learn from it and that’s why Jaago is invested in online school to improve the quality of education in our country” (FGD# 01, 03/07/2019).

4.2 Teaching learning process at Jaago online schools

Stakeholders of Jaago online schools, specially the teachers and education coordinators have many views about the online classroom and its teaching learning process and how teaching learning is continuing with lesson plans and classroom activities. I got different views and similarity among those ideas:

4.2.1 Instructional Language using in the teaching learning process

The teachers facilitates teaching learning process with both Bangla and English. But according to one teacher, “ As the lessons are in English in most of cases, teachers like to facilitate in English, but for understanding the lessons, many times we are using Bangla with the students” (FGD# 01, 03/07/2019). Important aspect is learners are enrolled or admitted at their very beginning of their student life. No admission is done in each year except only in reception class. As students are accustomed with the instructional language in the form of English from the beginning so they are used to with teacher’s facilitation. Another teachers sharing about some instructional languages where students and teachers both are practicing English such as to drink water, to go to washroom or to express queries during the lessons (FGD# 01, 03/07/2019).

4.2.2 Curriculum and learning material

One interviewer said, “Though we have limitations of resources and did not have proper structure for online teaching and learning process, but we always try to come up with new ideas how to utilize existing resources for effective learning” (FGD# 01, 03/07/2019). Another person shared that at first teaching medium was English, but after a year later we realized that English medium is expensive enough and it is harder for the kids to study in English medium where student’s socio economical background is different. So, we changed our curriculum and started a blended curriculum focusing on English version. When we started online schooling, we did not get quality teachers and resources as well. Resource means in remote areas the book we wanted them to collect which was not available, and the contents needed for practice not available as well. It is harder to get any learning material in Lakkhipur or Teknaf (Interview#2, 01/07/2019). Few participants said that technology helps us a lot with make teaching materials. When we took online class with visual aids, videos, songs, using art or shapes especially younger classroom students get very excited because they born in technological ages. It helps us to teach them and keep interest in learning and resources wise online class is very for effective learning and also teachers sit together and make teaching materials using laptops for their lesson plans and shared with each other for feedback and further cooperation (Interview# 1, 28/06/2019; FGD# 01, 03/07/2019).

4.2.3 Focus on English based learning

Several participants shared that the founder of Jaago Foundation Korovi Rakhshand himself is a student of English medium. From the very beginning Jaago foundation emphasizes English based learning because culturally we are legging behind in English. Especially we think about underprivileged children and their English language capability in Bangladesh. But now parents at Jaago are convinced to send their Kids at Jaago Foundation after knowing

that the kids will learn education in English (Interview#2, 01/07/2019). Another participant shared that we have objectives that we will provide better quality education. So, we emphasize in English as well as other subjects too in online schooling.

One of the objectives is to strengthen English language among the underprivileged children of different remote areas of Bangladesh. We face difficulties to understand the dialects of different areas like Bandarban, or Lakkhipur but we have successfully pull off the matter with our structured mechanism (Interview#1, 28/06/2019). Another response was that they admit children from reception and so schools get the opportunity to build children knowledge from the very beginning and the children are habituated with the system in the long run (Interview#2, 01/07/2019). During the discussion Research and development manager shares his insights regarding focusing on English,

We know English is no more a language, English is one sort of skill now. For any job or higher education or any sphere of English is valuable. So, they think that, if we able to teach them English, it would assist them in the future. So, they plan to teach them Basic English. Basic English means communicative English. So, this is very much the philosophy they have started with. So, we teach them Basic English, some moral education and aware them about hygiene related issues (Interview#1, 28/06/2019).

4.2.4 Teacher student ratio

During an interview found out that in online school, two teachers present in the same class. One teacher offline with the students in the classroom and another teacher is in online and teaching via technology from Dhaka. So, for 40 students they have 2 teachers. Reception and KG classes are different. They have two offline teachers for the student's engagement and overall management and one teacher in online provide instructions from Dhaka.

Another teacher said that our student's teacher ratio should improve because controlling 40 students online while focusing on learning becomes very difficult (FGD# 01, 03/07/2019).

4.2.5 Collaboration among online schools' teachers and local assistant teachers

One online teacher shared that we have assistant teacher there in physical school and building a good repo with them is very crucial because they represent the online teachers and if they are cooperative and collaborate with you properly then it helps you to execute the lesson plan. Students have more confidence in regular school than online school because they can interact directly and meet community people, but online teachers cannot do that (FGD# 01, 03/07/2019). Another participant shared that we give some extra time to online and offline teachers to collaborate with each other because it is the most important of the learning process otherwise any other effort will not be effective (Interview#1, 28/06/2019).

4.2.6 Classroom Management of Jaago Online School

For online schools, classroom management is mainly managed by the Assistant Teachers present with the students in the classroom settings (Observation #2, 18/09/2019). To have concentration in the teaching learning process, as instruction came from online, classroom management is a challenge for the online teachers (FGD# 01, 03/07/2019). Hence, Assistant teachers play a key role for this stated matter. Online teachers facilitates with multimedia such as presentations, pictures, videos etc. to explain the lesson and it is observed that students watch any video and multimedia presentations silently. But during any instruction or assignment from the text book to complete assistant teachers play a key role there to engage

students for the assignment and creating the learning environment (Observation #2, 18/09/2018).

4.3 Jaago online schools' Administration and Governance mechanism

While conducting interviews, FGD and observing I tried to discover how the mechanism of online school work and from the participants and observation found out:

4.3.1 Jaago Foundation Online School's teacher's recruitment and training

During FGD I found out that several teachers are from diverse back ground and top universities of country and they want to contribute to the society through their work and very passionate about it (FGD# 01, 03/07/2019). One teacher from FGD told me that he came here from a sense of responsibility and Jaago also hire teachers who are passionate about the cause. It's not job for most of the teacher but a place to do something better for this community of underprivileged. Several participants provided information about training is that they do not have any pre structural training system but when they join, they get trained by R & D people on a regular basis. They had to take training on NCTB and how to make learning very effective by making lesson plans more interesting for online schools. Also, Education coordinators and members of R & D online school team constantly support them with contents, teaching process, provide feedbacks on classroom materials and lesson plans. Teachers also attend different workshops and discuss different ideas. For them it is a continuous learning process and with experience they improve the teaching learning process (Interview#1, 28/06/2019).

4.3.2 Qualification of teachers

One participant shared that the qualification of the assistant teachers varied through branch to branch. Such as in Rajshahi, we get assistant teachers completed master's degree but in Teknaf, Bandarban, Gaibandha, Rangpur especially Lakkhipur we get assistant teachers maximum passed H.S.C. Even few days earlier in Teknaf we recruited assistant teacher have qualification of S.S.C because there is shortage of higher educated candidates (Interview#2, 01/07/2019). Online teachers in Dhaka are highly qualified like completed honors and masters and have previous experience from different organizations and most of them comes from reputed universities like University of Dhaka, North South University, BRAC University and many more (Interview#1, 28/06/2019).

4.3.3 Administrative Structure of the Online Schools

Research and Development Manager mentioned, "For every school, for the administrative work we have created a central point or connection. Each school has three to four administrative works. Procurement processing, collecting bills, process of bills, processing the expenditure of the month, planning for the next month's budget, suppose water would be found 3 days then manage the water for those days. For delivering these tasks project officer is assigned for each school. But some challenging work is also present. Such if somehow any School faces problems like internet or computer hardware or software problem then project officer can manage it by own by hiring people. But at the same for any problem from Head office project officer get support (Interview#1, 28/06/2019).

4.4 Technology Incorporation and Quality of Education at Jaago Online School

4.4.1: Technology Using at Jaago Online School

To accelerate online school role of technology incorporation is very much vital. Though diverse technologies are available in the market but fitting a technology with the program is the most important part. During the discussion with Research and Development Manager, led him sharing the process of using technology for online schools,

To conduct the whole online schooling system technology played a substantial role and the management and maintenance of the technology such as computers, online cam, internet, and electricity are big factors. The technical support that we need for online schooling is provided by Agni systems limited. Its support is very crucial as this is a complex process. Sometimes any maintenance issues created around internet, bandwidth we call up Agni to solve it. Agni is our partner as well as Grameen Phone. Agni is very crucial in terms of partnership. Cause if we got problem in internet it takes time to fix it (Interview#1, 28/06/2019).

4.4.2 Technical support for online schools

One participant revealed and others also collaborated that for online school main technical and financial support are provided by Grameenphone. They provide bandwidth services and technical equipment's like laptops, cameras, screens for the classroom, projectors etc. Agni Bangladesh provides support regarding maintains of the network system, repair and other aspects of online platform. Also, many donors gives laptops, computers, monitors, projects for the online school via our donation program (Interview#2, 01/07/2019). Jaago Foundation also have technical team those who give constant support to online teachers and offline teachers and if any problem occurs then they start work to solve that problem immediately (FGD# 01, 03/07/2019).

4.4.3 Bandwidth facilities for Jaago Online Schools

During discussion, Education Coordinator shares her insights regarding the bandwidth facilities of Jaago online schools, “Technical support is maintained by professionals such as internet facilities is provided by Agni in collaboration with Grameen phone. In each branch we have facilities like 1.5 GB to have sound internet for the communication. But we are facing challenges here as our classes are conducted in the video conferencing method. Like in reception classes, we have to show video materials a lot for the students. At that time, most of the internet speed is taken by the class and others get minimum internet speed, connection becomes slow for other classes, sounds are not heard properly. We have solved that problem by providing fixed internet for each class. At Lakhipur or Rangpur, internet connections and facilities are really inadequate and schools are in distance from the network tower (Interview#2, 01/07/2019)”. At the same time when bandwidth facilities become poor or any sort of technical problem occurs regarding maintenance issues created around internet, bandwidth Jaago authority call up Agni to solve it. Agni is their partner as well as Grameen Phone. Agni is very crucial in terms of partnership. Cause if they got problem in internet it takes time to fix it (Interview#1, 28/06/2019)”.

4.4.5 Using App for video conferencing for the online school of Jaago

Research and development manager said his experience of using different video conferencing apps for the online schools,

Online schooling is not as same as the formal setting schools. Lot of things are customized. Here one of the major aspects is collaboration. Between the teacher of the online end and school end needed highly connected collaboration. If the collaboration between the teachers is good, then the teaching learning process will be smooth and except this, it would be different to conduct the class and meet the learning outcome from the class period. Some more problems of online schooling we had found. We had started with Skype. We had some challenges and limitations around this technology. Through experimenting, we are right now using WebEx for conducting

the classes but still we are searching for the better technology (Interview#1, 28/06/2019).

4.4.5 Utilization of technologies for effective learning at Jaago online schools

One participant from FGD shared that for him learning means not just memorizing but actualizing the knowledge to improve skills and online platform is a great way to do that. Its support visual activities which help kids learn in better way (FGD# 01, 03/07/2019). Another participant from FGD explain that learning used to mean teachers will come and give lecture and go but now a day's approaches and methods of learnings are changing. Online school provide opportunity to create materials for student's very intuitive way so that every student can learn from it (FGD# 01, 03/07/2019). Another participant from FGD also shared that it is an online school it creates some interest among students because they are seeing us on monitor. It is a new thing for them. Our classroom materials are also different from the regular classroom like sound system there, visual aid easily available and can show and share latest information (FGD# 01, 03/07/2019).

4.4.6 Adaption of technology and students' assessment process

Several stakeholders shared that students are very used to with technology and it creates interest among kids to participate in classroom and classroom attention is also very good because children like watching something on TV then reading about it (Interview#2, 01/07/2019). Teachers said that they take oral exam one to one via online then collect half yearly and yearly answer scripts via mail from local school and offline teachers' cheek small assessment in the school and share results with them. It's very challenging and time consuming according to the teachers (FGD# 01, 03/07/2019).

4.4.7 Achievements of online schools in the eyes of the stakeholders

One participant shared that the student of Gazipur branch last year participated in PECE exam and have 100% passing rate. Four of them got A and rest of them get different grades. Among the rest of the schools Rajshahi has class till class 4. Other schools are keeping up and improving every year through experiences (Interview#2, 01/07/2019). Several teachers said our biggest achievement for online school is that remote areas students have access to quality education, and we are proud that our online learning techniques attracts and keep the concentrations of students then regular schools because of technology (FGD# 01, 03/07/2019).

4.5 Challenges faced by the Jaago online schools regarding technology utilization and effective learning

Teachers are the most concerns about the limitation Jaago online schools have in terms of online based classroom different views and ideas I have found during the question-answer sessions from the participants, those are:

One teacher shared with me that there is a huge challenge with different dialects of different areas. For example, Lakkhipur's teachers try hard to communicate in proper Bangla but every now and then they speak in local Noakhali dialect. The kids of Bandarban use their ethnic language as well. So, for the teachers from Dhaka sitting on a conference room started experiencing a lot problems for that though they try to overcome that with the help of assistant teachers but still it is an issue (FGD# 01, 03/07/2019). Another teacher added that we do not get professional training so for that it does not add value to our professional experience like government training in PTI school does also (FGD# 01, 03/07/2019).

Another participant shared that there are many critical issues like electricity problems, internet connection and bandwidth problem, weather problem or any natural disaster create pressure on us because if these things happen during class time then we must make up for that lost time later otherwise students will lack behind (Interview#2, 01/07/2019). Another participant added that though we are using technology for teaching but there is a missing piece teaching is building relationship with teachers which help a student and a teacher in growth of their personality build up. Also, we do not have advanced technology like other countries does which might enhanced the teaching learning process (FGD# 01, 03/07/2019).

Chapter 5

Discussion & conclusion

5.1 Discussion

In this chapter of this study, I am going to discuss my observations, experience from the research process based on data and results from chapter four. I will discuss my finding by relating from literature review section. In this research, I tried to find out how Jaago online schools exploring the initiatives to enhance the quality of education through technology. Considering current situation of the world, online schools become more important than anything else before and aligning with the need of that Jaago online schools significantly prove their worthiness and credibility through their online education program in the current context of educational system where government move forward to establish their agenda of Digital Bangladesh. Also, the National Education Policy 2010 of Bangladesh emphasizes the ICT education. To attach substantial importance to information and technology (ICT) along with math, science, and english in order to build up a digital Bangladesh based on knowledge-orientation and cultivation of ICT” (MoE, 2010). From my observation I can also say that Jaago brought a new dimension of distance learning for the people who did not have any scope to get any kind of education.

The combination of learning and technologies into classrooms is being promoted and supported around the world and teaching and learning is going to be social. Schools of the future could have a traditional cohort of students, as well as online only students who live across the country or even the world (Britland, 2003). Here, participants of the study described how technologies changing the learning process and improving the quality of education and providing access to education where people never imagined.

Regarding the teaching learning process, instructional language is facilitated both in Bangla and English. Jaago online schools prioritize English as they think in present era English becomes skill rather than only a language. So they aim to skill the students in English language. Hence the curriculum are in English version and teacher most of the time facilitated in English. In that case, students are not admitted in each year at any class or standard except only at reception class. So the students becomes very much familiar with the instructional language from the very beginning of their learning cycle.

Bangladesh is working towards incorporating ICT in the education sector to improve the learning experience (a2i, 2011). From one of the participant's perspective I have found that that our country is going for digitalization and for that our education system needs to be digitalized. So Jaago is going to that direction. Digitalization of a whole education system is a tough ask and would take time, in the meantime, Jaago wants to create a path so that other can follow and improve the condition. Another participant shared that how important online school in context of Bangladesh. Initially Jaago established a school in Gazipur outside Dhaka for the first time, but after some time, they realized that they do not have enough good quality English teachers there to support their English based teaching. So, they come up with an idea to take class online from Dhaka branch because they have good quality English version teachers here. So, Jaago negotiated with Grameenphone in that time and piloted online school in 2010-2011.

I found out from my conversation with Jaago R & D team member that in Moheskhali, the government of Bangladesh is running 100 online schools and planning to spread this schooling system in the other area of Bangladesh which can be model for other South Asian country as well. Several participants revealed that they did not face that many challenges from government side rather they got the friendly support. The minister of ICT Mr. Zunaid Ahmed Palak visited online schools and encouraged to work more in this sector. I also

observed and found out from informal conversations that Jaago is trying to collaborate with government to increase the amount of online schools with more resources.

As Khan (1997) defines that online education as a groundbreaking method for providing education to remote learners, using the internet as the method and evolution in technology has resulted in a significant progression of educational institutions to promote online educational programs. So, according to a participant, Jaago is trying to break the cycle of poverty through education in remote areas using technology. Also found out that online school provide opportunity to create materials for students' very intuitive way which creates interest among students because it's visually appealing.

Agreeing with the writer where he emphasized on the use of internet to access on content, learning materials, support during the learning process, construction of learning and growth learning to define online education (Alley, 2004). A teacher believe that learning means not just memorizing but actualizing the knowledge to improve skills and online platform is a great way to do that. Its support visual activities which help kids learn in better way. Another participant shared that as it is an online school it creates some interest among students because they are seeing us on monitor. Lesson plans and materials are also different from the regular classroom because we use sound system, visual content and can show and share latest information very quickly. During my observation I found out that one student asked about an animal and the online teacher instantly searched in YouTube and showed to the class and students were very engaged in the teaching learning process.

Accepting the writer view that traditional schooling system needs to embrace the innovation that technology confers on individuals more autonomy and becomes more individual-centered the logic of child-centered education which will become clearly apparent (Thomas, 1986). Participants especially teachers expressively shared with me that technology helps

them a lot with make teaching materials. When they took online class with visual aids, videos, songs, using art or shapes especially younger classroom students get very excited. It helps teachers to teach and keep interest in learning and teachers sit together and make teaching materials using laptops for their lesson plans and shared with each other for feedback and further collaboration. One of the objectives of Jaago is to strengthen English language among the underprivileged children of different remote areas of Bangladesh like Bandarban, or Lakkhipur and Jaago have successfully pull off the matter with structured mechanism by using innovative ideas and technology.

According to Prensky (2004) technology is now a considerable part of children's lives and for teaching and learning. It has become as intimate as breathing and that the reason technology has a practical impact on learning especially among young kids. More than a few participants shared that students are very used to with technology and it creates interest among children to contribute to lesson and classroom attention is also high because children like watching something on TV then reading about it. I have observed that a class of pre-primary kids are very attentive in their class because a song was running and they are seeing it in monitor which related to poem they are learning.

Smeets (2005) highlights ICT because he thinks use of technology adds to the power of learning atmosphere, both teachers and students get benefitted from the technologies and technology reduces the overburden of teacher the students visualize the contents from classroom then the learning becomes durable. To make sure that teachers can use technology effectively for teaching learning process Jaago provides trainings, workshops, lesson plans feedbacks by R & D team and education coordinators on a regular basis, but they do not have any pre structural training system. They had to take training on NCTB and how to make learning very effective by making lesson plans more interesting for online schools.

According to Gold (2004) because of technological development online education is developing rapidly. Application of innovative software has enabled communication features smooth and fast, providing more sophisticated and rich interaction which leads to effective learning and student satisfaction. In light of advanced technology one participant shared that there are many critical issues like electricity problems, internet connection and bandwidth problem, weather problem or any natural disaster create pressure on us because if these things happen during class time then we must make up for that lost time later otherwise students will lack behind. I have also seen that during an online class the remote computer went off and connection was lost for 10-12 mins and in the mean time learning was fully stopped.

Deloatch (2015) argues that technology changes the way children imagine and it puts privacy and safety at risk and makes children emotionally isolated. A participant added that though we are using technology for teaching but there is a missing piece teaching is building relationship personally which help a student to understand social norms and build personality. I found out during my observations that technology can enhanced teaching learning process effectively and efficiently and technology can create problems and break the cycle of learning if it is not used or handled properly.

5.2. Conclusion

As Bangladesh emphasizes the ICT education for our future generation, Jaago online schools already making pathway for that vision. Jaago online platform considerably demonstrate their merit and reliability through their online education program. Jaago is trying to incorporate technology into classroom in such way that leads to enhanced learning outcomes. Despite the challenges Jaago online schools making huge progress reaching isolated children of remote areas of Bangladesh and providing them quality of education by supporting teachers in many ways. Jaago provides necessary trainings to teachers and give regular feedback through their

R & D team and Education coordinators and provides necessary resources to students and teachers to ensure quality of education. Like Jaago more research and investment need to pour into technology based online learning, otherwise we will not be able to compete globally in near future.

5.3 Recommendations

Based on the observation during research some recommendations are shared herewith –

1. First of all, using of technology like WebEx, or any other improved technology should be incorporated so that teaching learning process cannot be hampered. At the same time, bandwidth quality needs to be improved and internet connection should be flawless so that students can concentrate without interruption. Electricity is one of the major component for the online school connectivity. Electricity should be provided without interruption as well. For this as the schools are in peripheries where electricity facility is not good, generator or other mechanism can be incorporated for the free and flawless teaching learning process.
2. Capacity building of the teachers is one of the important factor to ensure quality education. R & D team of Jaago has taken diverse initiatives in this regard, technology skill and teaching learning skill needs to be blended. More innovative skill development training and capacity building of the teachers needed.
3. Government should take more initiative on incorporating online education especially this model by replicating it in our formal mainstream education system.

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Appendix A

Transcription of Interview with R & D Manager

1. How does a Jaago Foundation initiative start?

- Rather than being hangout at Dhanmondi 27 or 32 or anywhere else, let's start doing something productive. So altogether they decided that as Rayerbazar slum is close to us, let's see whether we can able to teacher English and firstly it's nothing related to education- math, Bangla, religion or other subjects. But in front of them the next biggest question is, what is the meaning of good time or quality time with the kids? Then they together sit again with more friends and thinking about different ideas and including different discourses like moral values incorporation, hygiene education, providing hygiene goods besides as we know English is no more a language, English is one sort of skill now. For any job or higher education or any sphere of English is valuable. So, they think that, if we able to teach them English, it would assist them in the future. So, they plan to teach them Basic English. Basic English means communicative English. So, this is very much the philosophy they have started with. So, we teach them Basic English, some moral education and aware them about hygiene related issues. They rented a room at Rayerbazar Slum. Then the thinking was started, whom they would teach? So, they tried to convince the parents and the community that we wanted to teach your kids around these themes. This was tough for them to manage student as they were 22-25 years old young people. But ultimately, they managed the community and got first 17-18 bunch of students. To continue this initiative, we started to raise funds. While we were raising funds in our very first days, we just have the thought that we need white board or marker or rent of the room etc. Then we started thinking that we could provide the student's uniform or school bag as it were the symbol of schooling. So, after a few months later they thought about giving holiday. In the first stage, these were all voluntary work. After the holidays they started thinking to establish school. Basically, though they were doing this voluntary teaching, but the community assumed that they had sent their kids in school. During the establishing of the school, as they emphasized in English which would be better for the future of the students and most of the founder members came from English medium background, so they decided to build an English medium school. So, we went to different English medium schools like Scholastica, maple leaf etc. and tried to learn their teaching styles, curriculum, teaching learning process and then tried to replicate in our own school. During the replication many customizations and changes happened in the curriculum and the teaching learning process. Initially many challenges and struggles were

availed. We faced community resistance like they thought we could convert their kids in vulnerable positions, some INGO's thought that we were trafficking them abroad and, we faced challenges from government end to establish the formal setting of the school.

2. How did you think to initiate online learning in formal settings?

- When we are starting any new approach, it takes time to adopt the process and applicability. We had the same experience with the community while initiating the online learning. Every initiative needs time and visible positive change for the acceptance. Always we had the tendency to face any problems and find out the solution. While we were starting the formal setting school, we had some challenges like attendance, cleanliness of school uniform. When we set some rules and regulations to solve this issue but still didn't get the result, we found out that our community in many cases didn't have the affordability. Many parents of the community didn't have the ability to support the family with hygiene materials. So, we were providing them hygiene materials as well such as soap, detergent powder, shampoo, toothpaste, brush etc. Some problems like many students came to school being not having enough food. Thus, we started our nutrition program. Now a days, in every school of Jaago Foundation we provided food at tiffin. We had a tendency to seek the solution by facing the problems rather hiding around or shifting from the problem. Thus, this organization has grown. After establishing school at rayerbazar we got overwhelming responses from the community and we started thinking how we could expand our schools. As Korail is the biggest slum of Dhaka, we established school at Korail, then we established school at chattagram. Similarity between these three schools, all of them are situated in metropolitan city. Though Rajshahi is a metropolitan City but school is outward from the city. After the three metropolitan schools one of the companies from Gazipur proposed us to establish a school at their premises. They provided us the place and infrastructure. But after establishing the school, we got severe challenges like scarcity of skilled teachers as the school is English medium. And due to different circumstantial problems, we didn't get the teaching learning support and no possible solution of monitoring or supervision of the school from Dhaka. So then we were thinking aloud how we would could take our classes from Dhaka. Whether it is possible to take classes through Skype. As we didn't have the facility of monitoring from Dhaka due to distance, so we were thinking about it. At the same time, we were communicating with Grameen phone around this discussion and we proposed them to provide the necessary materials for piloting the whole idea. This is how the online schooling

started from 2011 from the deficiency of quality teachers at periphery level and have a concrete mechanism of monitoring and supervision centrally.

3. Would you please explain more about the technology and its incorporation in the teaching learning process?

- As we didn't have the experience of online schooling and nothing we can get from the pedagogy or any kind of internet research, so online schooling was a process of learning how we would be able to establish the teaching learning process through this medium. So from the beginning we relied on the first couple of teachers who started this online schooling, they had started the child centric online schooling approach. Online schooling is not as same as the formal setting schools. Lot of things are customized. Here one of the major aspects is collaboration. Between the teacher of the online end and school end needed highly connected collaboration. If the collaboration between the teachers is good, then the teaching learning process will be smooth and except this, it would be different to conduct the class and meet the learning outcome from the class period. Some more problems of online schooling we had found. We had started with Skype. We had some challenges and limitations around this technology. Through experimenting, we are right now using WebEx for conducting the classes but still we are searching for the better technology. When we were evaluating our first-year journey of online schooling we tried to compare with our conventional school system of Rayerbazar. As the curriculum and inputs of the teaching learning process between these schools are same, while evaluating the outcome we found some technical problems such as internet problem or electricity problems. Sometimes we had to cover the lessons by providing extra hour from the teachers end. In online schooling teacher took more time to understand students of the class compare to the conventional formal setting school. In conventional settings teacher can interact with the students directly, but in online schooling this scope is less. At the same Student also takes time to understand the setting of the online school, how they should interact through technology, how they would engage in the teaching learning process. And, we found some very interesting advantages like due to visual learning, students were more active and concentrating enough in the classroom and actively participating in any discussion of the classroom and they learn very fast. This setting is such useful that you can utilize lot more materials to teach the students. If you facilitate to teach the student such as vocab, you have the facility to use pictures for that. And Visuals are much exciting for the students always and they invest themselves in the lesson with interest. Another challenge for the online school is assessment. For copy checking of the Class test or

terminal exam, all copies are taken to the online platform of Dhaka. And for the ongoing lesson assessing we have to depend on offline teacher attending the class. If he or she is weak then it becomes a problem for the whole process. Oral assessments are taken by the online teachers but in time half yearly or other written exams are taken by the offline teachers. So right now, the assessment process is difficult and time consuming as well.

5. How does the management of the technology done by Jaago?

- To conduct the whole online schooling system technology played a substantial role and the management and maintenance of the technology such as computers, online cam, internet, and electricity are big factors. The technical support that we need for online schooling is provided by Agni systems limited. Its support is very crucial as this is a complex process. Sometimes any maintenance issues created around internet, bandwidth we call up Agni to solve it. Agni is our partner as well as Grameen Phone. Agni is very crucial in terms of partnership. Cause if we got problem in internet it takes time to fix it. Such as teachers prepare their lesson plans for the week and start taking classes. But sometimes if any storms hit to a location that it becomes difficult to conduct classes. So, extra effort needed from teacher's end to customize their plan. So Contingency plan is mandatory for taking online class. Sometimes teachers get demotivated cause effort to prepare a concrete lesson plan but even they struggle more when they don't able to execute their plan. From that end, we wish we could provide some more support to the teachers by ensuring smooth internet or electricity. Internet also depends on how in a specific area people are using data, the more data used by the community or in peak hour of internet traffic causes trouble in stability of the internet. However if we are able to ensure the smooth internet and electricity, online schooling would be a lot more impact to provide quality education in the peripheries.

6. Does online schooling follow a yearly calendar where they have to complete their curriculum within calendar year?

- Yes, we follow a yearly calendar with specific curriculum in terms of student achievement and overall outcome of the student. Normally, a class consists of 40 students. Suppose we have a lesson to complete within 4 days. But due to different rigor level of the students in the same class, sometimes it is tough to meet the deadline but to complete the curriculum with 100% students, students who have less rigor level have provided extra classes to complete the lesson. Suppose when students are given an activity where the offline

assistant teacher only have to supervision the whole class, at that time online teacher provide time to those students who needed extra support.

7. How are the administrative support provided to all the schools as some are situated in the very areas?

- For every school, for the administrative work we have created a central point or connection. Each school has three to four administrative works. Procurement processing, collecting bills, process of bills, processing the expenditure of the month, planning for the next month's budget, suppose water would be found 3 days then manage the water for those days. For delivering these tasks project officer is assigned for each school. But some challenging work is also present. Such if somehow any School faces problems like internet or computer hardware or software problem then project officer can manage it by own by hiring people. But at the same for any problem from Head office project officer get support.

If we talk about Academics work. In terms of Academic, beginning of the year a syllabus is prepared. Related to the syllabus, if any teacher face hurdles or challenges Education Coordinator tries to solve it. Thus problems are not needed to undertake by the research and development team. But some cases, R & D has substantial responsibility. Suppose class 4 students are very weak in English that they have the standard of class two. Then what do we do with these students? Branch school first takes the responsibility to improve their language skills. If Branch fails then R & D team provide interventions. Such as finding out the best practices of how to solve the problems of language skills. It is a process of continuous feedback. Each school has education coordinator in the offline but in online school education coordinator is situated in Dhaka rather than in the school as all the teachers are working from here. Research and development team helps and guides online education coordinator and teachers. Time and class hours are different than traditional school. For offline school teachers didn't need much time for the interaction or collaboration with the students. But in online school we have to allocate time for teachers to collaborate as each class has an assistant teacher from school end. That is why class time is shorter may be 5 minutes when the online teacher collaborate with assistant teacher; prepare lesson plans, assessment checking, classroom related sharing. Such as conventionally 50 minutes, here time allocation for each class 45 minutes.

8. How would you train or prepare the online school teachers?

- Firstly all the teachers have an induction training to understand the whole process. We don't hire teachers, we hire people who are passionate and wants to be a teacher. We provide basic training and the guideline we have for each subject, education coordinator of the school takes training sessions on those guidelines as well. And throughout the year, we facilitates trainings on many issues related to teaching learning process.

9. What are the future plans of Jaago Online School?

- To be honest, we are concerned about the growth of our effort. Definitely we are going to open up schools but still we are very much concerned how many schools we want to build. Do we want to build 100 schools? Do we want to build 60 schools? One of the bigger clarity of us that rather being establishing more schools we want to strengthen our program. What we are trying to do with curriculum and structure, our concern is how we can concentrate more to make it more perfect. How can provide more teachers trainings, how can resolve the problems of the teachers. For example: we had limitations of bandwidth. While we take the bandwidth from point A to point B, our concern is how we can reduce the loss of the bandwidth. The camera we use is there a way that the camera can use less bandwidth or any software which can reduce bandwidth use. So the process is technology evolving and changing to smooth the process.

In our R & D department, few teams are prepared to tackle different issues. Such as one team responsible for the concern of the students, one team is doing the administrative tasks, another team is concerned about the academics.

Outside of any metropolitan cities, there is a shortage of English teachers in the periphery of Bangladesh. There are many skilled teachers as well but still they used to struggle with English language.

So our vision is we don't want to build more schools rather we want to share our model with government so that the government can take this to another level. Right now we are consulting with ICT ministry, primary education ministry of government republic of Bangladesh. We are sharing our model, concepts with them. Maybe they can come up with better ideas or maybe they can use this model to train teachers.

10. Tell us more about the piloting of the online project with government.

- We are doing a piloting at Moheshkhali, Chattagram with government primary schools.

Financial expenses are concerns in online schools. We are experimenting with a lot of things to make it qualitative and cost effective. If one teacher is taking four classes what would be the effect of it or one teacher is taking two what would be the result of it. If we cannot make it cost effective then it would be tough to implement this concept in large scale.

Next year we are planning to piloting that one teacher at a time will conduct two classes. Offline teachers and online teachers are totally separate.

Appendix B

Letter of Consent: Sample

Informed consent for research participants

Information sheet

Purpose of the study: As part of the requirements of the Med. In Educational Leadership and School Improvement at BRAC University, I have to carry out a research study. The study is concerned with online education in Bangladesh.

What will the study involve: The study will involve conducting observations, interviews and discussions for about an hour with each person? You have been asked because you have been involved with Jaago online school for a long time.

Will your participation in the study be kept confidence: Yes, I will ensure that no clues to your identity appear in the thesis? Any extracts from what you say that are quoted in the thesis will be entirely anonymous.

Any further queries: If you need any further information, you can contact me: ShahinurSelimSujan, shahinur.selim@teachforbangladesh.org phone: 01723991922.

If you agree to take part in the study, please sign the consent form,

Consent Form,

I _____ agree to practice In Shahinur Selim Sujjan's research study. The purpose and the nature of the study has been explained to me in written form. I am participating voluntarily. I give permission for my interview with Shahinur Selim Sujjan to be tap-recorded. I understand that I can withdraw from the study, without repercussions, at any time, whether it starts or before participating in the interview. I understand that anonymity will be ensured at the write-up by disguising my identity. I understand that disguised extract from this interview may be quoted in this thesis and any subsequent publications if I give permission below:

Please Tick (✓) one box.

- I agree to quotation or publications of extracts from my interview.
- I do not agree quotation or publications of extracts from my interview.

Sign:

Date:

Note: This consent form has been adapted from a sample found in a research paper from Brac Institute of Educational Development.

Appendix C

Interview Guides for Research & Development Manager

Name:

Age:

Sex:

Educational Qualifications:

Job Title/Role:

Years in the role:

Prior Experience:

Site:

Date:

1. Why did Jaago Foundation start the online school? What was the vision and objective of Jaago Foundation regarding Online School?
2. What is Jaago Foundation doing with regards online education? Who are involved in these initiatives?
3. What are the necessary technical supports you need for the school? How you have managed those?
4. On the website it says the online school is English Medium, how do the students cope up with this? Is English the only language of instruction?
5. What sort of curriculum is being used? How the whole mechanism of teaching learning process is going on?
6. How does teacher utilize different materials in the teaching learning process in this online school paradigm?

7. How do you assess students in this online school paradigm? Do they have both formative and summative assessment?
8. How does the feedback and other related information given to the students and parents?
9. How well do the students cop up with the use of online education?
10. What are the qualifications of the online teachers? Do they require any technological skills?
11. What sort of training do the teachers receive in online technology used in online education?
12. What are differences you experienced between online and traditional school system?
13. What are the challenges you have faced during the intervention of online school?
How did you resolve those challenges?
14. What is your personal view about online education? What role online education does play for quality of education

FGD Guideline

Date: Place: Time: Duration:

Facilitator: No. of Participants:

Name of School:

**N: B: This FGD questionnaires are for both Teachers and Students+
Questions:**

I. What does learning mean to you?

II. What do you mean by quality of education?

III. What is your view about technology?

IV. How technology is incorporate in Jaago online school?

V. What are the positive and negative things about using technology in the classroom?

VI. How students are processed technology in the classroom?

VII. Is there any difference exist between online and traditional school system? If yes then what are the differences? If no, then why do you think online schooling is aligned with traditional school system?

VIII. What are the challenges you have faced during the intervention of online school? How did you resolve those challenges?

IX. What role online education has for quality of education in Bangladesh?

Classroom Observation Guide

Class: **Subject:**

Date:

Class Size:

Site:

Time:

Tool:

Start	
Stop	

No	Area of Observation	Categories	Description of Activities	Comments
1.	Teacher's teaching method	Lesson plan & execution		
		Learning material		
		Sort of Assessment Incorporation		
		Practice time for students		
2	Student	Interaction of the students with teachers		

	Activity	Questioning towards Teacher		
3	Classroom Management	Different practices in the class		
		Transition in the class		
		Student behavior & attentiveness		
4	Use of Technology	Technical support with equipment		
		Learning material using technology		
5	Infrastructure	Washroom Classroom space Library Computer lab Playground & other facilities		