

REMOTE TEACHING-LEARNING PROCESSES DURING THE
SCHOOL CLOSURE OF COVID-19 OUTBREAK IN SOME
SELECTED PRIMARY SCHOOLS IN DHAKA CITY

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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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Ethics Statement

This research is completed with full compliance with the ethics norm and upon approval of BRAC Institute of Educational Development's research ethics committee. A research proposal has been submitted to BRAC Institute of Educational Development (BRAC IED) before data collection. After getting approval from BRAC IED the research has been conducted. Consent has been taken from all the participants before doing the interviews. In case of children – the consent has been taken from their parents as they are aged under 18 years old. The participants have also been ensured to have the freedom to withdraw their statements anytime they want. Pseudonym has been used for participants to strictly maintain the confidentiality of data.

Abstract

The highly contagious nature of novel coronavirus disease (COVID-19) forced the Bangladeshi government to shut down all the educational institutions since March 18, 2020. This prolonged closure not only caused interruption of in-person schooling but also increased anxiety and uncertainty among them. The present study aimed to explore the perception of the teachers, students and parents regarding remote teaching-learning process as an emergency response to reduce the study gap during COVID-19 pandemic. With a semi-structured interview guide, data for this qualitative study were collected from 12 purposively selected participants (teachers, students and parents) who are associated with government primary schools, using telephone and Zoom interviews. Result suggested that participants are satisfied with the ongoing remote teaching-learning process considering the practices as an emergency response to the sudden school closure. However, participants (teachers, students and parents) also expressed their dissatisfaction based on the challenges they have faced due to scarcity of the resources, and unequal accesses and opportunities for all. Participants shared their views on Zoom platform as the best modality in remote teaching-learning process due to the opportunity of video interaction. Very few teachers were found to take short examination remotely; instead they are assessing the students through the given home works and home assignments. The paper concludes with few recommendations such as providing digital devices to the teachers and students to participate in remote class; facilitate rigorous training to enhance technology-based skills and capacities of the teachers and students; inclusion of a robust monitoring and evaluation system for the successful implementation of remote teaching-learning initiatives and development of the blended teaching-learning framework in the education system according to the context and the socio-economic status of the beneficiaries to get the expected outcome in terms of designing effective remote teaching-learning programs and strategies during any emergency situation.

Keywords: COVID-19; Remote Teaching-Learning; Government Primary Education; Dhaka city

Dedication

This Thesis is dedicated to my beloved grade 5 students with whom I have spent hours teaching in distance during the school closure of COVID-19 pandemic.

Acknowledgement

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List of Acronyms

GoB	Government of Bangladesh
MoE	Ministry of Education
MoPME	Ministry of Primary and Mass Education
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
WB	World Bank

Chapter 1

Introduction and Background

1.1 Introduction

The global education system has been severely impacted by the COVID-19 pandemic. Many countries throughout the world have closed their educational institutions in order to slow the spread of this virus, which has caused numerous problems (Naciri et al., 2020). For example, as a result of the health crisis, about half of the world's children are still affected by partial or complete school closures, and over 100 million extra children will fall below the minimal reading competency level (UNESCO, 2021). The scenario is not different for Bangladesh. Every educational institution of Bangladesh including the primary educational institutions remain closed since 18 March, 2020. For optimizing the effects of the pandemic in the education sector, the Ministry of Primary and Mass Education (MoPME) opted for quick initiatives to engage school level students through remote learning mechanisms. Knowing the perceptions of beneficiaries on these initiatives are necessary for its long-term sustainability. Thus, in this particular study I have mainly focused on the schools that are built for the underprivileged children in Dhaka city of Bangladesh which have practiced remote teaching-learning during the school closure caused by coronavirus outbreak.

1.2 Research Topic

All the schools and educational institutions closed down from 18 March, 2020 to the declaration of Bangladeshi government's lockdown restrictions for COVID-19. As a result, remote teaching-learning has been a burning topic of discussion in the education system of the country. According to UNESCO (2020), the definition of remote learning is,

Learning that occurs when the learner and the instructor, or source of information, are separated physically and hence cannot meet in a traditional classroom setting – it includes “online learning” as well as lower-tech remote learning options (e.g., TV, radio, email).

Due to long school closure many of the students are now studying remotely for the first time and adapting with new normal. Only 8.7% of the poorest 20% households in Bangladesh

have internet access at home as compared with 75.3% of the richest 20% households (UNICEF, 2020). This digital divide is pushing most of the school going children to the threat of being the dropout of school. To ensure equity of education and making remote learning an option for as many children as possible during the crisis period, it is important to take into account the perceptions of teachers, parents and students. Study on the perception will help experts to understand the context of the beneficiaries and will give them a clear picture in designing effective remote learning programs and strategies.

1.3 Statement of the Problem

Since the education ministry ordered closing of all schools and other educational institutions across the nation from March 17, 2020, traditional schooling has been impaired and examinations across boards have postponed indefinitely. These closures impacted over 36 million students between pre-primary and tertiary levels (World Bank, 2020). To ensure continuity of learning during school closures, the Ministry of Education (MoE) and Ministry of Primary and Mass Education (MoPME) implemented remote learning programs via ‘Sangsad TV’ and on their online platforms: e-konnect, Facebook and YouTube (World Bank, 2020). In Bangladesh, four working groups have been established by the Ministry of Education (MoE) and Ministry of Primary and Mass Education (MoPME) to develop remote learning content and roll out lessons through four platforms: Electronic Media Platform, Mobile Platform, Radio Platform and Internet Platform. Government, Development Partners, and NGO entities are working together in each working group to produce and facilitate remote learning contents to reach a maximum number of students. (MoPME, 2020). In this study I have focused on these particular areas by finding the opinions and factors affecting the opinions of the participants towards remote teaching-learning amid the pandemic period. Through this research, I have drawn a clearer picture of the current scenario that is related to remote teaching-learning in the primary schools in Dhaka city.

1.4 Research Questions

In this study I have explored participants’ views towards remote teaching-learning by answering the following research questions:

1. What are the factors that influence the students, parents, and teachers to participate in the remote teaching learning process?

2. How do the students, parents and teachers engage with remote teaching learning processes?
3. How do the students, parents, and teachers perceive about the quality of the remote teaching learning process?

1.5 Purpose of the Study

The main purpose of conducting this study is to find out the perception that our students, parents and teachers hold on existing remote teaching-learning process. Also, there may be many factors that have an impact on their particular views. Therefore, I also looked at the factors that are responsible to shape their views towards the methods and mediums of remote teaching-learning. In addition to students and teachers, parents can also get engaged in the remote teaching-learning processes. Therefore, along with teachers and students, I have presented findings on the involvement of parents in the remote teaching-learning process in this study.

1.6 Significance of the Study

As the emergency remote teaching-learning process entered our lives during the COVID-19 outbreak, the importance of school outside of academic activities i.e., social interaction, mental well-being etc. became clear to us. It has shown that the school is not only a place of learning, but also a social common space that provides socialization, care from teachers and peers and facilitation (Misirli & Ergulec, 2021). According to the theory of social constructivism, learning occurs in a social context with individuals' interactions by active participation, scaffolding, and knowledge exchange (Vygotsky, 1978). The remote teaching-learning experience gained during the COVID-19 outbreak should not be forgotten once the crisis has passed. In most emergency situations, the education system does not consider the perceptions of teachers', students', or parents' before designing or taking any action to provide education services, remotely. As voiced by Bozkurt and Sharma (2020), when things go back to normal, the students will remember how they felt during this emergency situation, as well as their parents. Similar emergency situations could arise at any time in the future, forcing educational institutions to close and use remote teaching-learning. Thus, it is important now to evaluate our experiences to be better prepared for future needs to carry out the emergency remote teaching (Hodges et al., 2020). Given the possibility of encountering similar situations in the future, teachers', students' and parents' views are important to guide

and contribute to the process. Thus, the findings of the study will help policy makers and educators to design effective remote learning programs and strategies by taking into account the perception of teachers, parents and students in future as well as at present to design effective blended teaching-learning process.

Chapter 2

Literature Review and Conceptual Framework

In this chapter, I have presented reviewed relevant literature to discuss the concepts related to my research topic. I have organized my literature review under the two categories i.e., Perception on Remote Teaching-Learning and, Practices of Remote Teaching-Learning. I have also presented a conceptual framework on the implementation of successful remote teaching-learning process.

2.1 Perception on Remote Teaching-Learning

Worldwide in the education sector remote teaching-learning has gained importance during COVID-19 pandemic. In this light, many researchers have carried studies to know the perception of teachers, students and parents regarding remote teaching-learning process. According to a study done by Limniou and Smith (2010), teachers' and students' perspectives on remote education are related to their personal characteristics, as they have different experience. Their study also reveals that, students want their teachers to use a more interactive teaching approach with the use of collaboration tools. Instructors can use techniques to increase accessibility of interactive formats (Gillis and Krull, 2020). Instructional strategies, challenges, support system, and motivation of teachers plays a very important role in shaping teachers' perception on remote teaching-learning process (Ramitadila et al., 2020). It is less essential which instructional style teachers employ than how well they put it into practice for student learning (Gillis and Krull, 2020). Students have a positive perception of mobile-learning as a mode of remote education (Biswas et al., 2020) but most students faced obstacles to learning as a result of the pandemic, such as distractions, increased fear, and a lack of motivation (Gillis and Krull, 2020). Teachers, with the help of parents, must employ motivation-enhancing techniques to avoid a drop in academic drive during emergency times (Zaccoletti et al., 2020).

2.2 Practices of Remote Teaching-learning

Remote learning refers to the process of teaching and learning performed at a distance. Rather than having students and teachers coming together in person, remote learning means that students are distanced from their teacher and their peers.

2.2.1 Knowing the students

Knowing the demographics of students who are going to participate in remote learning process as well as understanding their motivations for attending the remote classes, is beneficial for a teacher in any setting for planning the remote teaching process (Bricknell and Muldoon, 2012). Students participating in remote education activities are not necessarily technologically literate always (Fish and Wickersham, 2009), so need-based assessments might be used by teachers to provide students practice using relevant online technologies (Woodley et al., 2017). Students' demands and challenges are likely to change in an emergency remote transition, therefore teachers should familiarize themselves with their students' new obstacles and situations before designing remote teaching-learning activities (Gillis and Krull, 2020).

2.2.2 Learning objectives and appropriate tools

Any lesson that is going to be taught by the teacher must begin with clearly stated learning objectives (Martin et al., 2019). Teachers can construct particular activities that fit with at least one of the learning objectives that they have created (Alston 2017; Martin et al. 2019). This strategy can motivate teachers to not only employ technology that will assist students accomplish learning objectives but also to embrace new digital tools (Bailey and Card, 2009; Clark-Ibáñez and Scott, 2008; Woodley et al., 2017).

2.2.3 Regular Communication and clear expectation

Regular communication from teachers can help students feel less anxious about a remote changeover in an emergency. Teacher must regularly update students about lessons and respond consistently to student inquiries, and grade in a timely manner (Alston, 2017; Bailey and Card, 2009). Timeliness, rather than promoting interactions, is more important for student achievement in remote learning (Martin et al., 2019). Students are more likely to commit to their studies when teachers convey high expectations (Bailey and Card, 2009). New organizational tactics must be established rapidly and consistently in the context of a distant shift.

2.2.4 Synchronous Versus Asynchronous Approaches

The sudden shift to remote teaching and learning spurred a debate concerning the relative benefits of synchronous, asynchronous, and blended approaches to remote education.

Synchronous classes necessitate both students and teachers being online at the same time, using a virtual platform like Zoom, which encourages engagement but limits flexibility (Hsiao, 2010; Skylar, 2009). Asynchronous classrooms have more flexibility and self-paced learning alternatives than synchronous sessions do (Hsiao, 2019). Less engagement or excessive reading and writing duties, on the other hand, are substantial negatives side of asynchronous classes. (Boling et al., 2012). A blended strategy attempts to strike a mix between the two strategies, maybe by holding one synchronous session each week and otherwise relying on discussion sessions (Zhang and Chen, 2021). Despite the fact that the discussion over synchronous versus asynchronous approaches exploded in 2020, the majority of extant research focuses on the impact of adding synchronous features to exclusively asynchronous courses (Skylar, 2009). For example, Hsiao (2010) looked at students' reactions to asynchronous and synchronous interactions and discovered that while they liked the flexibility of asynchronous forums, they also liked the occasional chance to communicate with others in synchronous forums. Boling et al. (2012) found that from the student perspective, the most successful online classes incorporated diverse strategies for engagement, such as live conversations with experts in their field.

2.2.5 Barriers to Remote Teaching and Learning

In any educational setting students may suffer from lower rates of digital literacy due to uneven access to technology (Hargittai 2003). During the COVID-19 epidemic, early studies revealed that such drawbacks appeared within months of schools switching to remote teaching-learning (Vogels et al., 2020). Furthermore, participating in virtual classes can be even more difficult with unexpected Internet outages, such as disruption while taking an examination via virtual platform (Olt and Teman, 2018; Ryabov, 2012). When learning amid a crisis, like as the COVID-19 pandemic, such obstacles may be amplified, and new ones may arise. For example, in normal times, students with Internet connectivity issues at home may go to nearby neighborhood to get help with internet connection; however, this option is also recommended not to follow during this Covid situation due to social distancing.

Because remote teaching-learning is a new experience in Bangladesh with limited practice, it will take certain modifications, improvisations, and special considerations to make this new mode a feasible solution to teaching-learning in the remote settings (Mondol & Mohiuddin, 2020). Systematic analysis of perception shared by teachers', students' and parents' from Government primary schools during the emergency transition to remote education will aid in

assessing not only the effectiveness of various instructional tools, but also finding solutions to barriers that students faced during their learning (Gillis and Krull, 2020). Thus, my study to explore the perception of beneficiaries from Primary education level perspective in Bangladesh will contribute to the literature of remote teaching-learning process for designing future intervention.

2.3 Conceptual Framework

According to UNESCO, effective execution of remote teaching-learning depends on the four-action checklist i.e., understanding the remote teaching-learning, deciding and designing delivery strategy, executing the strategies with continuous monitoring and adjustments. Therefore, this framework's motive is to know the perceptions of students, parents and teachers to design and implement successful remote teaching learning process. The framework of UNESCO is given below –

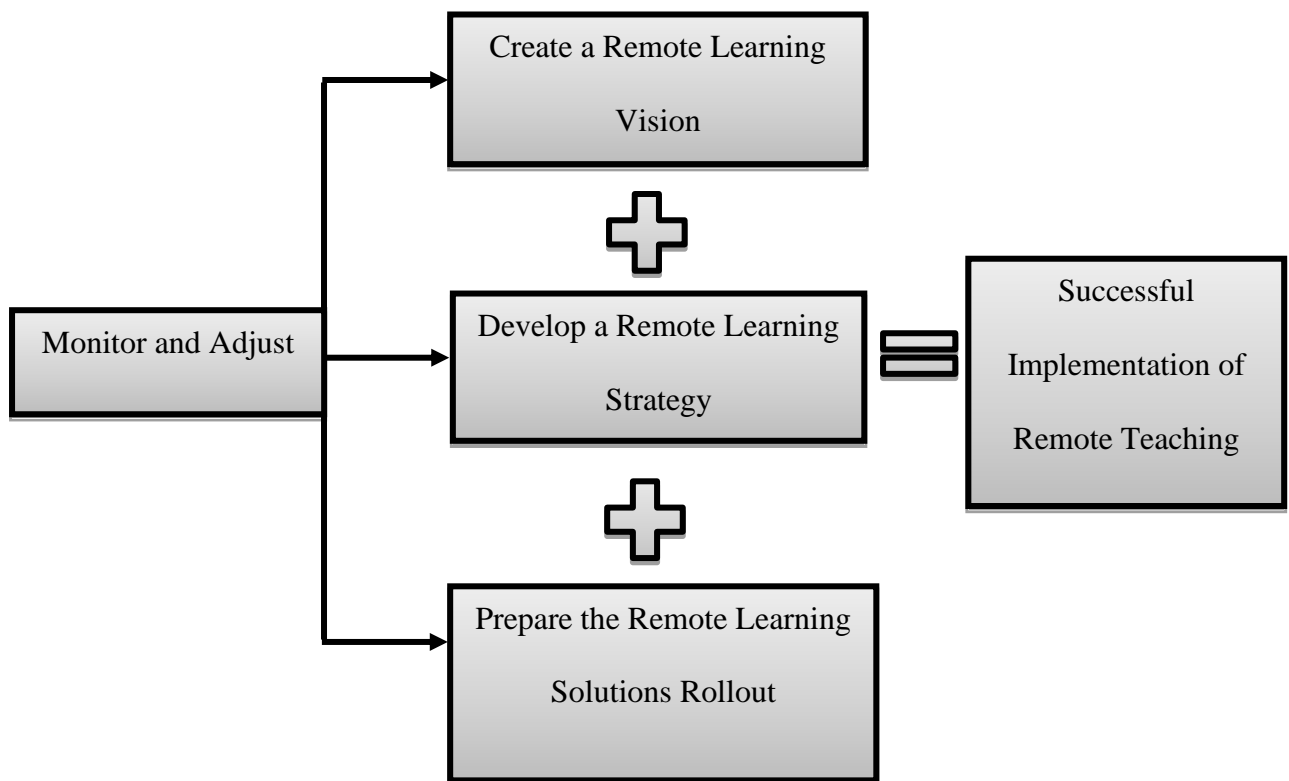


Figure 1: Framework for Successful Remote Teaching-Learning Process

Source: UNESCO, 2020

Chapter 3

Methodology

3.1 Research Approach

I conducted the study using qualitative research approach because it helped me to create meaningful and logical explanations of human thinking, behavior, and actions based on the experiences (Abuhammad, 2020; Marvasti, 2004) of primary school going students, parents and teachers regarding the remote teaching-learning process during COVID-19 pandemic. Explanations of complex social issues are often difficult to grasp because they are influenced by socio-economic and political-cultural contexts, qualitative research methods enable researchers to collect validated human experiences that are specific to a particular social setting (Lune and Berg, 2017; Maxwell, 2012). This study aimed to find the different views on remote teaching and learning that students, parents and teachers have. Hence, qualitative data were needed to answer the research questions in an in-depth way.

3.2 Research Site

I selected two government primary schools from two different Thana of Dhaka city as the research site for this study. These particular research sites were selected because these schools performed remote teaching-learning as an emergency response of sudden school closure and thus able to provide an overall idea on how the stakeholders of the government primary schools in Dhaka city perceive remote teaching-learning process.

3.3 Research Participants

Research participants of this study were primary level students from grade 3 to grade 5, their parents and primary level school teachers. Teachers were responsible for conducting remote teaching activities for students and parents often get involved with their children to help those attending online classes or completing task in remote teaching learning process. Therefore, these participants shared their in-depth experiences and perspectives about remote teaching learning during COVID-19 pandemic which helped to answer the research questions. In total 12 participants were selected from two schools.

3.4 Sampling Procedure

In this research purposive sampling was used for the selection of participants. Research participants were selected based on two criteria 1) Participants were from Government Primary School of Dhaka city, 2) Participants have actively participated in remote teaching-learning during the school closure caused by Covid-19 pandemic. All the participants had access to smart phones with internet connection or, owned a feature phone or, had access to Radio and Television. They were purposively selected for this study to get in depth information on the remote teaching-learning phenomenon.

3.5 Data Collection Methods

An interview is generally a qualitative research technique which involves asking open-ended questions to converse with participant and collect data about a subject. Interviews are particularly useful for getting the story behind a participant's experiences. The interviewer can pursue in-depth information around the topic (McNamara, 1999). So, interview method was one of the main data collection tools of my study. I interviewed eight adult persons and four primary school going students through Zoom/Imo video calls considering the pandemic situation. Individual interview slot for each participant was scheduled according to their preferable time. During interview, participants answered the open-ended questions which was asked from interview guide. All the interviews were recorded which I transcribed as soon as possible.

3.6 Role of the Researcher

I have worked as a primary school teacher for two years starting from 1st January, 2019 till 31st December, 2020. During that time, I taught my students both in physical classroom and virtual classroom as well as discussed different topics on remote education with other teachers and parents. During the interview I tried to stay aware about the fact that I am a researcher in this particular context. I should not sound like a teacher when I am interviewing my participants. As a researcher I was very careful that my own experience of remote teaching-learning should not come in between me and my interviewees as a distractor when the participants are sharing their experiences.

3.7 Data Analysis

Thematic analysis is a method for analyzing qualitative data that entails searching across a data set to identify, analyze, and report repeated patterns (Braun and Clarke, 2006). So, for this research collected data were analyzed through thematic analysis.

To perform data analysis at first, I read all the transcripts again and again in order to develop familiarity with data. Next, I organized the data in a meaningful and systematic way by generating codes. Then, all the codes were organized into broader themes based on the pattern of responses. After that, preliminary themes were reviewed and modified keeping research questions in mind. Finally, a thorough understanding of each theme was developed and based on that the final findings of this study were written.

3.8 Ethical Issues and Concerns

Before interviewing all the participants I explained them the purpose of the study and ensured them that their statements will only be used for the higher study as a part of my M.Ed degree. I asked all the participants for their pseudonym during the interview to protect their identity. As a researcher I was mindful to create a participant friendly or child friendly environment while collecting data for this study and use the data as it is without manipulation. Before that, I ensured that they have full consent to participate in the study. I used a participant friendly language so that participants understand my queries and concerns. I was respectful, non-judgmental, and empathetic and ensured confidentiality of the participants.

3.9 Credibility and Rigor

Before conducting the study, I have successfully completed Research Methodology 1 and Research Methodology 2 as a part of mandatory course content to achieve M.Ed degree in BRAC University. I developed research proposal, worked on feedback and got approval from the faculty members before going to field for data collection. Prior to that I had an experience of field research to complete my master's degree in Agricultural Economics. During my undergraduate days I successfully completed 2 trainings on the basics of research with statistical analysis. My prior experience in data collection with interview, data analysis and data interpretation have helped me a lot in this study to perform the research activities confidently.

3.10 Limitations of the study

For this study, I wanted to observe Zoom classes, but I could not. No class was scheduled for this year in both of the schools at the time of data collection, in the month of March, as there was a possibility to reopen school. All the participants shared their experience of previous year's remote teaching-learning (Year 2020), for that reason participants had to recall their memories from the past year. Participants, especially, parents and shy students, who are not that vocal, felt hesitate to talk in details with the researcher. Few of the research participants were late for the pre-scheduled interview and they were in hurry for personal work. Therefore, their interview time got shortened. Considering the pandemic situation, all the interviews were done via online meeting platform Zoom. Due to the internet limitations and electricity problem, few participants attended the interview over phone calls. Lastly, this study is limited to the Government primary schools of Dhaka city so the findings do not represent the experience of whole Bangladesh.

Chapter 4

Results

4.1 Introduction

Emergency remote teaching-learning process has been taking place newly in Bangladesh after the sudden and prolonged school closure caused by the COVID-19 outbreak in the year 2020. The study's purpose is to know the perception of teachers, students, and parents towards the emergency remote teaching-learning process. For the study purpose, I interviewed a total of 12 teachers, students, and parents associated with the Government Primary School. Participants shared information via interview method about their one-year experience in the remote teaching-learning process has helped to gather detailed data to analyze and make the research findings. In this chapter, I presented the study results with supporting evidence, including some direct quotations and thoughts of the teachers, students and parents collected from the interview. After the analysis of data and organizing data codes into few broad themes, the three main themes are a) Initiation of the remote teaching-learning, b) Implementation of the remote teaching-learning, and c) Initiatives to improve the remote teaching-learning emerged. These themes helped me to understand their perception on remote teaching-learning.

4.2 Initiation of the remote teaching-learning

On 18th March 2020, all educational institutions of the country got shutdown amid a surge of the Covid-19 virus. Since then, no face-to-face educational activities took place between teachers and students as a result of an uncertain situation. However, most of the educational institutions gradually broke the initial inactiveness caused by the COVID-19 pandemic and resumed educational activities through various platforms of remote teaching-learning.

With regard to restarting academic activities, the necessity of communicating with students from the teachers' end was immediately felt. In most cases, teachers communicated with students after the arrival of the notice from school with some instructions to bring as many students as possible under the remote teaching. One of the teachers explained the scenario as-

To be honest, no communication was made from my end for the first 1-2 months after the school closure. Besides, there was a possibility for the schools to be reopened

then. The schools were supposed to be opened after 15-20 days or one month, but there was no plan to keep the schools closed for a long time. Later, when it was understood that the situation won't allow reopening the schools, a decision was made to take classes online, and based on that an official notice came from the school. After that, we started to think about how can we do it personally and it was done accordingly. (Bokul Akhter)

Teachers also responded that they got involved in the remote teaching process because students were going through a long study gap resulting from the communication gap for an extended period. According to a primary school teacher Bobita Chowdhury,

When I first contacted them [students], they were disconnected from their study and were sitting idle. But, after I started to give them homework and tasks through Zoom class, they began to enjoy it.

On the other hand, the feeling of closeness with friends and teachers during online video classes came out as the main exciting reason among the students to involve themselves in remote learning. One student named Fahim Ali said,

I can see and talk to a few of my friends and teachers in video calls during Zoom class. I miss my school and seeing them in person regularly.

Students also took part in remote learning because of their self-paced interest in academic studies. Afroza Islam, a student of grade 5 mentioned,

If I had not involved myself in studies via online learning platforms, then I would have mostly spent my time playing with my younger brother. So, I studied remotely during school closure.

For parents, initiatives from school authority to conduct the online classes were the main motivation to let their students participate in remote learning. A parent mentioned that,

If no initiatives of online classes were taken from the school, then my son's study would have been in a stagnant condition. Because children consider lessons taught by teachers very seriously. They do not listen to us [parents] when we tell them to sit for study. When a teacher assigns studies, they finish the study very sincerely. (Mousumi Alam)

Concern about children's mental well-being also drove parents to take part in remote learning during the prolonged school closure. According to a parent named Afia Islam,

My child was getting bored due to the long school closure. She was losing interest in her studies. I became interested in online studies for my child thinking that- even though it is not like a physical classroom, my daughter will be able to communicate with her friends and teachers at least for few minutes. Whatever she does in that time is enough for her studies and wellbeing considering the situation.

To summarize, teachers initiated emergency remote teaching when official notice of starting remote teaching came from the school authority to minimize the students' learning gap during the school closure. Whereas, students took part in remote learning from their urge to continue their academic studies by staying connected with teachers and friends over online platforms. For parents, keeping students under the teacher's supervision to carry out children's regular studies from distance and keeping children in communication with their friends to minimize the feelings of boredom were the main reasons for participating in the remote teaching-learning process.

4.3 Implementation of the remote teaching-learning

After the initiation of the remote teaching-learning process, several methods and platforms were followed by the teachers, students, and parents for its successful implementation.

4.3.1 Mediums and methods followed for remote teaching-learning

Teachers played the leading role in setting up mediums and methods before starting the remote teaching-learning during school closure. Virtual platforms like Zoom, Messenger and IMO were the most commonly used online platforms by the teachers to perform teaching from distance with the students who have access to the smartphones and internet. One teacher named Bokul Akhter said,

At first, I told them [students] that I would help them open their Zoom IDs but they would have to have internet data available on their mobiles. In this way, we the teachers, opened class wise 4-5 different Messenger groups. In most cases students' IMO and Viber IDs were automatically generated and got saved after saving their numbers to phone contact.

For the students who have smartphones with limited internet access, IMO- a mobile application was frequently used for study purpose. Bobita Chowdhury, a teacher of grade 5 mentioned,

Students those who couldn't join the messenger group, contacted me through IMO and asked to give them daily home tasks and lessons.

As the method of remote teaching, significant number of teachers told that they taught maximum share of their students through weekly instructions over phone calls or text messages for those who do not have internet access. Teacher Bokul Akhter described the process as,

I used to call them 5 days to provide them weekly lessons and homework based on the syllabus. For example: If today I called 5 students to give them instructions of study, similarly I used to give to 5 more in the next day. In this way, I used to call them class wise in 5 days every week and provided them with weekly lessons and tasks.

For students with regular internet connection, teachers took weekly classes on Zoom through providing class link on Messenger. Moumita Alamgir, a teacher of grade 5 said,

I used to take classes on Zoom, there was a schedule. I provided the link of the class in Messenger group.

In addition to phone calls, zoom class and text messages, teachers uploaded bite size video lessons in the school's official Facebook page and shared the link to their students so that they [students] can watch the video lessons upon their internet availability. According to teacher Bobita Chowdhury,

I recorded some grade wise lessons and uploaded them to our school's official Facebook page as per the notice from Thana Education Office. Students who were not able to attend Zoom classes, I provided them the link to watch the video lessons later.

Other than these platforms, teachers also instructed the students to watch broadcasted lessons on Television (Sangshad TV) and Radio (Bangladesh Betar) an initiative taken by the GOB to reach mass students. Bobita Chowdhury added,

I told my students to watch the lessons of Sangshad TV. I collected the broadcasting schedule from Facebook and shared the routine with students in messenger group and phone calls. There used to be classes in Bangladesh Betar as well. Be it smartphone or

feature phone, everyone had radio in their phone. I used to encourage my students to listen to radio lessons for 5-7 minutes at least. Some used to listen and some were not.

Students followed the methods guided by the teachers for remote learning with the help of their parents. Before taking the initiatives of remote teaching from school some students continued their regular study with the help of their parents and home tutor during the school closure. Mohona Akhter, a student of grade 3 said,

I studied with my mom and my home teacher.

Also, students did self-study with the help by watching educational videos YouTube. Sobuj Khan a 4th grader mentioned,

Sometimes I watched YouTube videos to understand my lessons from Textbook.

4.3.2 Experience of remote teaching-learning

In the wake of the Covid-19 pandemic, educational institutions around the world had to adjust with the new way of teaching learning approach. This study found following experiences of teachers, students and parents in adoption with newly introduced remote teaching-learning process.

4.3.2.1 Participation

Students and parents were happy when teachers communicated with them to start the teaching from distance as teacher Bokul Akhter said,

I communicated with guardians at first and told them that I will start online class with those who have internet connection. They agreed immediately. Both guardian and students became delighted knowing that they will be studying again with their teacher.

In terms of interaction during Zoom class both teachers and students said that the interaction was not like real physical classroom. As per a student,

Zoom classes are somewhat like school classrooms then again it is not. Teachers teach us lessons and ask questions like physical classroom but sometimes I do not understand what they say. (Fahim Ali)

Some students said that they had no issues to interact properly with their teachers. Afroza Islam, a student of grade 5 said,

I liked Zoom classes. I asked follow up questions to my teacher when I did not understand a topic and she taught me the topic again.

On the other hand, students who are shy in nature felt uncomfortable to ask questions during online classes. As per a parent named Mariam Begum,

My son does not ask questions to teachers if he faces difficulties to understand lessons taught on Zoom classes. I have told him several times to ask questions to his teacher for clarification but he hesitates to do so.

For assigned homework, students participated in well manner. One teacher named Elora Khan said,

Homework responses from students were satisfying. Those who attended Zoom class were very interested. They loved to do the classes; they were enthusiastic.

Students also submitted their regular assessment and assignment through online. For those who do not have internet teachers asked random short questions from the textbook over the phone and students answered them. Teacher Moumita Alamgir mentioned,

My students sent me the picture of their homework over Messenger and IMO. The response from all students was good except few students. When I told my students that they have to submit subject wise assignment, they were so eager to do so.

4.3.2.2 Mediums

Although several mediums have been used for the purpose of conducting remote teaching-learning as an emergency response of school closure caused by the pandemic, research participants have shared opinions on the effectiveness or usefulness of each medium based on their experiences. Zoom came out as the most effective platform to teachers in terms of conducting remote teaching other than any medium. According to the teacher named Bobita Chowdhury,

Out of all the mediums of remote teaching, Zoom class seems very fruitful to me. Communication style is nearly similar to physical classroom here. We can directly

talk to students during the Zoom class. Students can also ask direct questions if they do not understand a topic.

Students also said that, they like to do classes on Zoom as in that particular medium they can study and see their teachers and peers during the class. Student Fahim Ali said,

I like Zoom class, I can meet my friends there.

Like the same way many parents expressed their opinion in favor of Zoom class as a parent named Moushumi Alam mentioned that,

Sir [teacher] teaches many students all together in Zoom class and gives more homework. That's why my daughter learns more from Zoom class.

According to teachers, students were less interested in classes broadcasted by Sangshad TV. Elora Khan, teacher of grade 3 said,

My students were not attentive in watching Sangshad TV because the broadcasting time was in afternoon when they take rest. So, they did not watch them and they also think they do not get benefitted from those lessons.

For some students, Television was the most likable medium for learning comparing to Zoom class. Sobuj Khan, a student of class 3 said,

I can watch live classes on Television. There teachers teach lessons so well also gives us some wait time to write exercises. Zoom class is also good but it takes place in mobile's small screen. In Television, I can do class in big screen, so I like television.

Some students who did online classes via IMO said that for them IMO is the most convenient platform for learning. A student named Mohona Akhter said,

I can ask questions to teachers on IMO but I cannot do that for Television lessons.

Teachers were not satisfied with the pattern of Radio class. Teacher Bokul Akhter explained her opinion as,

The pattern of Radio is not very good. Class cannot be done only by listening. They on aired the recorded class. I did not like that at all. My students are already weak. There is no one in their house who will help them to understand a lesson. So it is not rational to release the record of the class on the radio. It has been done just to show that classes have been taken.

4.3.2.3 Challenges

Participants shared many of their challenging experiences of remote teaching-learning for the first time. Lack of internet connection was the biggest challenges for teachers to reach out all the students. Teacher Moumita Alamgir mentioned that,

My students were not frequently available on virtual platforms because they purchase minimum mobile data to use internet. They have so many financial problems in family, their mobile data ends very quickly.

Students could not attend online classes regularly due to their limited access to smartphone. According to teacher Bobita Chowdhury-

Some students used to call me to say, “Ma’am I cannot do the class today as my father will go outside during the class time with the phone.” I could not tell them anything.

Students could not join online classes or other virtual educational platforms regularly due to the family’s financial problem. Mariam Begum, a mother of third grader said,

My family’s economic condition is not good. We do not have regular Wi-Fi or high-speed internet connection. It is not possible for me to afford internet frequently.

Teachers faced tough times in keeping up students’ enthusiasm for online classes. Students were enthusiastic in the initial phase of the online class which decreased gradually day by day as Bokul Akhter, teacher of grade 4 and 5 mentioned,

When I first started online class, my students were more interested and attentive to classes but they lost their interest afterwards.

Negligence of teachers was pointed out as the main reason behind student’s lack of interest. Teacher Bokul Akhter explained the reason as,

Many times, one or two teachers could not take classes routine wise. Students used to ask me on the phone, if the assigned teacher will take classes or not? We, teachers are negligent. There are many teachers who think that- “Zoom class? Who else will come to monitor? I won't take Zoom class today.” I used to take daily classes as a class teacher. But I can't force others to take theirs. If I don't take a class one day, the children will think that it is okay not to come to Zoom class regularly.

Some teachers shared concern about different level of learners in online class just like teacher Elora Khan explained-

When I teach 8 children together, the level of understanding of all of them does not stay the same. So it is a challenge for me to make them understand equally.

Teachers also faced technical challenges to manage time during online classes. Teacher Moumita Alamgir stated,

I cannot teach in Zoom like I teach in physical classroom. Time on the Zoom class gets finished very fast. Again, it is seen that if one student joins, then some other students are joining one after the other, thus the first 10 minutes of class get over. Sometimes they don't mute, they remain unmute. Sometimes they don't understand.

Guardians shared their challenging experiences of Zoom class in terms of time, care and management. As per a parent named Afia Islam-

If a math is not understood in the first attempt in physical classroom, my child has the opportunity to ask teacher and understand it again for the second time. But in Zoom class there is no such way. In Zoom class, students are just listening to whatever the teacher is saying. Or the kids are in the Zoom class but when they do classes, they sit and do mischief on the other side. This is not the way to study.

Students found it hard to comprehend specific subject based lessons during remote learning. Fahim Ali described his experience as,

I understand Bangla, Social Science and General Science but English and Mathematics seems tough to me to understand in online class.

To summarize, online platforms like Zoom, Messenger and IMO as well as Television, Radio were in use for conducting remote teaching-learning process. Different methods were followed by the teachers and students based on the availability of their resources for teaching and learning from distance. Participants had positive opinions about emergency teaching and learning practices in terms of participation, enthusiasm, homework and assessment. Also, they faced several challenges to cope up with the newly introduced practice in terms of class time, human interaction and availability of smart-phone and internet.

4.4 Initiatives to improve the remote teaching-learning

Participants suggested following initiatives that can be taken to mitigate their challenging experience.

4.4.1 Availability of Internet and Technological Device

Almost all of the participants shared their opinion to ensure internet availability and smartphone access for remote teaching learning. Teacher Moumita Alamgir said,

If government takes initiatives for providing smartphones, then it would be very helpful. Some people do not have the financial ability to purchase smartphone. Most of the guardians of my students work as home makers and rickshaw puller. Only 5% of my student's family is solvent.

Guardians have demanded availability of internet in affordable cost as a parent named Afia Islam explained-

We have to pay the internet bill. The internet bill has become a burden for us. Because our business and trade now are nothing like before. Everything turned out bad. Now, if the government can give us internet for less money or give it for free, it will be better, we will not feel pressure then.

4.4.2 Planning and Supervision

Teachers talked about planning and follow-up activities for proper implementation of remote teaching-learning process. Teacher Elora Khan expressed her opinion on planning as,

Guidelines with routines from school is necessary. To ensure everyone's access in remote learning, planning is important. Not everyone has internet at home but the child next to him may have internet. This is how group study planning can be done from distance. Although it would not be right to say this in Corona situation, but children are going to a friend's house next door. So proper planning is needed and it will vary school to school, community to community.

Teacher Bokul Akhter mentioned the necessity of strict follow-up from head teacher's end. She stated that,

I think the head teacher should strictly supervise online classes. He is added in all groups of online platforms, getting the link of class. But he should see how the

teacher is conducting the class. As in school, he supervises everything, visits classes. Similarly, he has to supervise online classes to see if the assigned teacher is doing the class or not. This can reduce the problem of teacher's reluctance in taking online class.

4.4.3 Training and Workshop

Teachers told that they need training and workshops with experts to learn more about the techniques of remote teaching. Teacher Bobita Chowdhuri said,

At first, we learned the operation of Zoom from our relatives and colleagues who are technologically updated. Now there are so many platforms to take online classes and many interesting methods as well. Any arrangement of training or day long workshop from school or from Government, be it physical or virtual would be very much fruitful for us to be more condiment with remote teaching.

4.4.4 Class Time and Frequency

Students told to extend the online class time. Afroza Islam, a student of grade 5 said,

Zoom classes were done only for half an hour. It would have been better to take a little more time for the class. Because, I cannot learn much in half. If the classes were taken a little more time, I would have read more and I would have done more homework. My attention would also be good to the classes.

Guardians also want online classes to be held for a longer period of time. A guardian named Fatema Sultana said,

The time given for Zoom class is very short. It would have been much better for our kids if it had been extended a little longer. The class had been done only once in a week. If it had been done two or three more times in a week, the children would give a little more importance in study.

Parents put emphasis on teaching all subjects in a day like regular school. According to Moushumi Alam, a mother of a primary school going student,

It would be better to teach 6 subjects every day. Mathematics requires much explanation but other subjects do not have to be explained that much. It is better to teach small portion of each subject regularly. When teacher only teach 3 subjects

regularly, other 3 subjects remain in gap. If all 6 subjects are covered in a single day, then the importance of each subject prevails to children.

To summarize, in improvement of the existing practice of remote teaching-learning process, participants suggested to increase the class time and frequency of the Zoom class with strict monitor by the Head Teacher of the school. They demanded quick initiatives from government to solve the problem of internet and smartphone availability. They also told to arrange for workshops or trainings on remote teaching-learning process for the capacity building of teachers, parents and students.

Chapter 5

Discussion and Conclusion

5.1 Discussion

Almost all aspects of life, including Education, have been profoundly affected by the outbreak of the COVID-19 pandemic across the globe, and Bangladesh has not been an exception to that. To control the rapid spread of COVID-19 infection, the world leaders have imposed super strict rules such as social distancing through a lockdown and closing down crowded places like educational institutions for physical distancing. In Bangladesh, social distancing was adopted in March 2020 after the first confirmation of the COVID-19 case. Schools were identified as a major epicenter for the sudden outbreak, as they had the largest concentration of students (Van et al., 2010). To limit the transmission of the virus, COVID-19 related school closures in Bangladesh started on March 17, 2020, and have continued into 2021. The sudden close down of educational institutions has affected about 38 million students and close to one million teachers (World Bank, 2021). In this chapter, I discuss the findings of my study that I presented in the previous chapter with the support of relevant literature. I present the discussion through some major themes such as: reasons for participating in the remote teaching-learning process, involvement and interest in remote teaching-learning process, technological limitations and slow internet connections, preferable modalities of remote teaching-learning, and perception of the quality of the remote teaching-learning process. In this chapter, I also suggest some recommendations based on my findings and discussions.

5.1.1 Reasons for Participating in Remote Teaching-Learning process

To help students mitigate their learning gap during prolonged school closure, Government of Bangladesh (GoB) introduced remote learning through television, mobile phones, radio, and the Internet. In my study, through the analysis of primary data I have found that, teachers took part in the remote teaching after getting official notice from the Thana Education Office to start remote teaching for reducing student's learning gap. As the whole situation was uncertain, teachers had no clue or guidance to reach out to their students amid the pandemic. After getting instructions from the authority and despite not having any prior experience of

remote teaching, teachers responded quickly with a positive attitude to GoB's initiatives in starting remote classes for their school students with whatsoever gadgets they have with them.

There is evidence that social isolation during the pandemic was linked to loneliness, other health-related behaviors and negative mental health outcomes for children (Loades ME et al., 2020; López-Bueno R et al., 2020). Children who were homeschooled during COVID-19 had social isolation measures placed on them, even though they may not have followed the recommendations (Brooks SK et al., 2020). During the lockdown, students had less opportunities to interact with teachers and peer which likely resulted in decreases in connectedness (Zaccoletti et al., 2020). In my study, I have found that students participated in remote learning via online classes because they were missing regular interaction of school with their peers and teachers. They considered online classes as a way to keep themselves in minimum touch with their friends and teachers during the school closure.

My study revealed that most of the parents having little educational or no educational background felt incompetent and less confident to help their children with regular guidance to carry out their daily academic studies. While participating in remote learning, children had to become more self-dependent in order to complete the tasks assigned by the teacher remotely. Children were more in need of support from their parents when it comes to helping them with school work (Zaccoletti et al., 2020). As a result, parents took part in the remote teaching-learning process to help their children with studies under the guidance of a school teacher during the prolonged school closure.

5.1.2 Involvement and Interest in Remote Teaching-Learning

After the analysis of data, I have found that teachers and students have participated enthusiastically at the beginning phase of the remote teaching-learning process but over time both of the stakeholders have lost their interest. To make the remote teaching-learning initiative more successful, involvement and participation in remote learning need to be boosted via carrying out different instructional methods. In this respect, teachers can develop online educational materials that align with the national curriculum with the government's help (Vlachopoulos, 2020). Students often express concern about the lack of interpersonal communication with the teacher and other students in remote courses which can make it harder to connect, express feelings, and learn (Hsiao, 2010). According to the findings of my study, teachers are using an only lecture-based methods for teaching primary school-going

kids via Zoom class or Video record. The development of free educational materials by the central authority would help teachers to reduce their burden of making learning material and will allow them to invest more time in planning for engaging teaching methods. In addition to online educational resources, social media and video conferencing applications, or other social features can help parents cope with the availability of teaching materials for students at home (Dutta, 2020; Lemay & Doleck, 2020). To address this issue, the Bangladesh Government has started to broadcast pre-recorded lessons for primary school children from April 7, 2020, in the state-run 'Shangshad Bangladesh Television' (MoPME, 2020).

However, there are limitations due to TV programming not reaching the participants of my study for broadcasting schedule issues. From the analysis of the participant's response, I found that lessons were not broadcasted following the promised schedule which made students less interested to continue their remote study on Television. Evidence suggests that televised educational content better promotes learner engagement when it is adapted to be context-specific (Baloch et al. 2020). Considering the issue of inclusiveness (reaching all children), other platforms for remote learning, such as radio (national, FM and community) and mobile phones (both feature and smartphones) have also been explored by GOB. Considering that 95% of the population in Bangladesh has mobile phones and radio programs can be accessed through a large percentage of mobile phones, radio and mobile-based distance learning programs have been developed and broadcasted (MoE, 2020). Participants of my study have expressed their unwillingness to listen to those Radio programs. Recorded classes on the radio are one-way communication which leaves no room for students to interact with anyone during the broadcasting time. This is a reason behind no interest in Radio classes among the participants of my study.

5.1.3 Technological Limitations and Slow Internet Connection

Educational institutions can continue academic activities during the pandemic without increasing social contact or increasing the danger of the pandemic (Rajhans et al., 2020). Remote teaching-learning on virtual platforms could be a realistic option only when the necessary resources both technological and financial are available and there is agreement between the two sides – service providers (teachers) and service receivers (students) (Van et al., 2010). According to the findings of my research, both students and teachers are hesitant to participate in remote education due to the scarcity and an unequal distribution of resources. Moreover, many of the methods of the remote teaching-learning process require money for

hardware and software applications and for expanded data plans to use the materials. My findings are also supported by Sikirit (2020), According to him, the absence of Internet connectivity and technological gadgets is the most major barrier that students experience when studying at home. Money is still a concern in Bangladesh when it comes to acquiring these resources. Only 5.6 percent of Bangladeshi homes had access to a computer in 2019, whereas 13 percent of the population used the internet (World Bank, 2019). Furthermore, in 2020, 56 percent of homes had access to a television, whereas just 0.6 percent of the population had access to a radio (GoB, 2020).

5.1.4 Preferable Modalities of Remote Teaching-Learning

Educators have utilized a range of communication platforms to facilitate remote teaching and student learning during the COVID-19 pandemic school closure. From the analysis of my study, I have found that students have watched broadcast classes on Sangshad Television. However, there are limited means to assess children's learning from educational programs of television (Baloch et al., 2020). Although recorded lessons have been broadcasted via Radio, none of the participants of my study expressed their opinion on the effectiveness of radio classes for their remote teaching and learning process. The impact of interactive radio instruction remains unclear outside of a classroom context (Baloch et al. 2020).

Mobile devices have gained in popularity as a convenient way to browse numerous social networking sites and use various social media applications in recent years (Biswas et al., 2020). According to many research, students' need for learning applications is on the rise (Hossain and Ahmed, 2016). In this scenario, social media apps are important. (Biswas et al., 2020). In my study context, most of the teachers and students are frequent users of Facebook Messenger followed by IMO and WhatsApp, while mild interest in YouTube for remote teaching and learning activities. Above all the modalities, participants of my study expressed more preference on virtual classes via Zoom for carrying out their academic activities remotely. From my study, I have found the opportunity of video interaction as the main reason for Zoom class preference among the participants. According to the result of my study, during class time students and teachers get the opportunity to see each other in videos while listening to each other like a regular classroom. My finding is also supported by the argument of Pierson (2017) as he stated that students who saw the teacher's face in an instructional video reported feeling more connected, satisfied, and engaged with their remote learning experience than students who did not see the teacher face. Online delivery sessions

can become interactive and dialogic with the help of Zoom's multiple features. Zoom allows teachers and students to share browser screens and to use collaborative tools like response systems to facilitate active learning leveraging the interactive environment (Moorhouse and Kohnke, 2020; Kohnke, 2019). As a result, the acceptance of Zoom class in remote teaching-learning has been at its peak as the most effective platform for remote teaching and learning among the participants of my study. Preferential remote teaching-learning platforms such as Zoom, Messenger, IMO, and WhatsApp chosen by educators and students should be in consideration of policy-makers of the education sector of Bangladesh while initiating any policy related to remote teaching and learning.

5.1.5 Perception on the Quality of Remote Teaching-Learning

Analysis of participants' responses from my study indicated differences in perception, particularly in relation to their emergency response, availability of technologies, and financial background. From my study, I have found that teachers are satisfied with their responses to remote teaching as an emergency measure. According to Hodges et al. (2020), "Emergency remote teaching is a temporary shift of instructional delivery to an alternate delivery model due to crisis circumstances that would otherwise be delivered face-to-face or as blended methods and will return to the previous format once the crisis or emergency has abated." In my study, every teacher expressed positive opinions about their first-time experience of remote teaching as they believe that they have successfully provided emergency academic support to their students utilizing the most use of their limited resources. My finding is also supported by Hodges et al. (2020), as they stated that the major goal of remote teaching in emergency situations is to give temporary access to training and resources in a way that is easy to set up and reliable during an emergency or crisis, rather than to re-create a comprehensive educational environment.

Negative social situations, such as family problems or peer pressure, can have a negative impact on students' attitudes toward school and learning (Urdan & Schoenfelder, 2006). In my study, I have found that students who had easy technological and internet access, are satisfied with their remote learning as their first-time experience but they have faced difficulties to understand some subjects especially Mathematics and English. The findings of my study showed that this is happening because of the absence of meaningful peer-to-peer and teacher-to-student interactions to ask questions and clarify topics. According to Gillis & Krull (2020), the transition to remote instruction may cause peer-to-peer learning to go

unnoticed for students, especially if teachers do not create opportunities for students to collaborate in group work. Assigning virtual group work to students might help them to learn English and Mathematics lessons during the remote teaching-learning process. On the contrary, students with limited internet and technological access expressed their dissatisfaction with their experience citing difficulties in understanding the operations of technologies, in attending the virtual classes regularly, and in navigating the schedule of broadcasted lessons in Sangshad Television.

In emergency remote teaching-learning process, parents are the most important interest in education because only parents can physically accompany their children and their learning by providing digital technology, learning environment and necessary support (Misirli & Ergulec, 2021). After the analysis of my study, I have found that parents who do not have affordability issues with technology and the internet are satisfied with their experience of the remote teaching-learning process. They are grateful to the teachers for being in communication with their children. Whereas, parents from lower socio-economic status expressed their dissatisfaction due to their increased burden generated from internet costs and urged to reopen the school to run regular academic activities. In relation to the quality improvement of the remote teaching-learning process, all the participants of my study stressed that continuous training or workshops on technological capacity building, whether online use (TV learning, radio, online applications) or offline (printed teaching materials and textbooks) is necessary with the strict monitoring of the whole remote teaching-learning system.

5.2 Recommendations

Based on the analysis of my study I have developed some recommendations that could help the concerned stakeholders involved with the country's education sector, including the Government.

1. Adequate trainings and support materials to teachers and caregivers should be provided by the government to ensure their effective role play in active participation in the remote teaching-learning process. The development of a strong communication plan is necessary to ensure teachers, students, and parents are capable to use various tools to support their learning continuity.
2. Small video clip tutorials with easy language especially for students should be provided by educational institutions or Governments focusing on the usage of technology and effective use of online materials for their learnings.
3. Special programs should be initiated by Government and educational institutions so that students from the lower-income community can borrow digital devices like smartphones for educational purposes in the time of emergency.
4. Uninterrupted internet connection needs to be ensured by the Government in all the corners of the country.
5. Government can offer a limited number of internet data consumption without any cost for students' virtual classes.
6. Government should take low and no-tech interventions such as providing printed materials to hard-to-reach children for the student's educational continuity during emergency situations.
7. Teachers should use creative teaching techniques to increase the students' interaction and participation in the remote teaching-learning process, especially while teaching Mathematics and English.
8. Radio broadcasting of lessons has a limited reach due to the lack of an interactive approach. Radio broadcasting should not be considered for emergency remote teaching-learning process rather it can be used in the medium or long term to reach drop out students.

9. The concerned authority should strictly follow the grade-wise class schedule regularly to broadcast lessons on Television.
10. During the implementation of the national curriculum in the emergency remote teaching-learning process, educators and decision-makers should design remote teaching-learning frameworks that consider student's backgrounds, particularly family economic background as well as student's learning needs.
11. While developing interventions for remote education, the concerned authority should include a robust monitoring and evaluation system for its successful implementation.
12. Development of the blended teaching-learning framework in the education system according to the context and the socio-economic status is of utmost necessary in the post pandemic era. Experience of traditional classroom and virtual classroom following a two-way input method can bring a better result in the teaching-learning outcome for those who have poor internet connection and bandwidth issue.

5.3 Conclusion

As an emergency response to sudden closures of educational institutions due to the COVID-19 pandemic, the Government of Bangladesh had taken different initiatives to utilize Information and Communications Technologies (ICT) in remote education at every phase of its education sector starting from primary level to tertiary level. The main focus of my study is to understand the teachers', students', and parents' perception of the remote teaching-learning process during COVID-19 in Bangladesh especially in the Government primary school context. The study shows that teachers of Government Primary schools have a positive perception of remote teaching whereas students' and parents' perception on remote learning differs based on their technological access and family's economic background. Participants took part in remote teaching-learning activities intending to stay connected as well as to prevent themselves from the learning gap. Participants have used different modalities (Television, social media applications, text messages, and virtual classes on Zoom etc.) for the remote teaching-learning process. Among all the modalities, virtual classes on Zoom application are the most preferential to the participants for remote education as there is an

opportunity to see each other via video calls and thus create a feeling of connectedness. However, the findings also demonstrated that peer-to-peer interaction in the virtual classes were absent and student-to-teacher interactions were less detailed due to time constraint and limited access to the internet connection. To facilitate remote education, Zoom's numerous capabilities, such as screen sharing, hand raising, and break out rooms, have huge promise for providing educators with a valuable tool for formatively measuring learning, encouraging small group interactions, and engaging learners. In addition, teachers, students and parents of government primary schools have the willingness to participate in the remote teaching-learning process if they have access to technological tools and the internet. Thus, the policymaker, as well as the educational institutions, should consider the opportunity of virtual classes on digital devices with uninterrupted internet connection and should come up with creative interactive learning methods with strong monitoring and evaluation system to enhance the process of remote teaching and learning.

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Appendices

Appendix A. Consent Letter

Letter of Consent for Participants

Consent to Participate in the Research

Title of the Study: Remote teaching-learning processes during the school closure of COVID-19 outbreak in some selected primary schools in Dhaka city

Name of the Researcher: Rechel Auditi Rema

Written Consent

I am confirming that the researcher has explained all the elements and activities associated with the project and I understand the information provided by the researcher.

I am ensuring that I had the opportunity to ask questions about the study and the researcher has answered my questions and queries to the best of my satisfaction.

I am well aware that my participation is voluntary and I can withdraw myself anytime from the project being not bound to give any reason.

I understand that the information or data I will be giving to the researcher, can be withdrawn by me from the study at any time and the researcher will not use any data or information given by me without my consent.

I am assured that the researcher will maintain full confidentiality in terms of using the data.

Name of the Participant:

Signature and Date:

Letter of Consent for School Authority- Principal/ Head Teacher

Date:

The Principal/ Head Teacher

School Name:

Subject: Permission to conduct Interviews with teachers and students.

Dear Sir/ Madam

This is to let you know that I am conducting a research titled ‘Remote teaching-learning processes during the school closure of COVID-19 outbreak in some selected primary schools in Dhaka city’ as a course requirement to fulfill my M.Ed. degree from Brac University. I am writing this letter to you to ask your permission to allow me conduct survey and interviews of the teachers and students from grade 3, 4, and 5 of your school for the completion of my thesis.

Both the survey and personal interview will last about 15-20 minutes each. I will arrange the interview at a convenient time according to the teachers’ and students’ schedule. The provided information from the participants will be kept confidential and the participation will be fully voluntary. Name of your school and the participants will not be used in any place of the thesis or publication without consent. After analyzing the data and completing the study, you will be given a copy of the entire thesis in an electronic version if you are interested.

It will be greatly appreciated if you kindly you give your consent and permission to conduct this study at your school. If you agree to give permission, kindly put your signature below along with date. Thank you in advance for your cooperation and necessary action to conduct this research.

Sincerely

Rechel Auditi Rema

Student, Master of Education, BRAC University, Dhaka.

Approved By Name:

Designation:

Signature:

Appendix B. Interview Guide

Research Tools

Interview guide for Teachers

School Name:

Grade:

Sex:

1. Why did you participated/involved your kid in remote teaching/learning/teaching learning?
2. What are the methods followed in remote teaching learning?
3. What is your experience (positive and negative) so far in remote teaching learning? (Instruction, interaction, participation, homework, assessment etc.) Please explain and give examples.
4. What about the quality of remote teaching learning? How the quality can be improved?

Interview guide for Parents

School Name:

Grade:

Sex:

1. Why did you participated/involved your kid in remote teaching/learning/teaching learning?
2. What are the methods followed in remote teaching learning?
3. What is your experience (positive and negative) so far in remote teaching learning? (Instruction, interaction, participation, homework, assessment etc.) Please explain and give examples.
4. What about the quality of remote teaching learning? How the quality can be improved?

Interview guide for Students

School Name:

Grade:

Sex:

1. Why did you participated/involved your kid in remote teaching/learning/teaching learning?
2. What are the methods followed in remote teaching learning?
3. What is your experience (positive and negative) so far in remote teaching learning? (Instruction, interaction, participation, homework, assessment etc.) Please explain and give examples.
4. What about the quality of remote teaching learning? How the quality can be improved?