Inclusivity in Virtual Teaching: An Exploration of Inclusive Practices in Virtual Teaching at Bangladesh.

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 my 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 that has been accepted or submitted, for any other

degree or diploma at a university or other institution.

4. I have acknowledged all the main sources of help.

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Approval

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Ethics Statement

Before starting data collection, an ethical approval application was submitted to BRAC University and consent has been received. There were several ethical issues and concerns in this research, such as taking consent, comfortability regarding the interview questions, and confidentiality of the identity of the participants. For the first concern, not only was a consent form sent to all the participants.

A consent form explaining the research purpose and the researcher's role was provided to each participant. All of the participants signed the consent form only after getting clarifications about all of their concerns. Meanwhile, a few questions could have made participants uncomfortable while answering as the answers might include sensitive information. The participants were given complete freedom to skip any questions, as well as leave the entire interview at any point if felt awkward answering during the interview. Another issue came up regarding the confidentiality of the participants' identities as the data may jeopardize their careers and affect institutional image crisis. Therefore, assurance was provided that their identities would not be disclosed in public or anywhere in the research paper. All of the conversations were recorded and transcribed to maintain ethical principles.

Abstract

The objective of this research was to study the inclusive practices introduced and maintained during synchronous virtual teaching and learning at the tertiary level. A qualitative approach has been adopted to conduct the study. As noticed through the progression of data collection and analysis the teachers and students are keen towards the promotion of inclusivity at the tertiary level. They feel such practices would be conducive to the overall teaching-learning culture of the country and their respective educational institutions. As for the participants, the teachers unanimously approve of different inclusive practices while the students feel a sense of belonging in the classrooms where these are incorporated. However, there are some barriers to the promotion of this concept at the tertiary level. The barriers include interference from the administration, lack of training in inclusive practices and the mindset of students. While coming the recommendations, the teachers had some recommendations such as more emphasis on inclusivity by institutional administration, incorporation of inclusive practices from the primary and higher secondary levels of education and training frameworks established to promote such practices.

Dedication

This Thesis is dedicated to my partner, Ms Rukhsar Raiyan Modina, without whom I would not have been able to gather the courage and energy needed to finally rejoin my academic journey and complete this dissertation.

Acknowledgement

First, I am thankful to my creator almighty Allah for keeping me healthy and for guidance, for getting me where I am today. I am extending my sincere gratitude is also extended to my research supervisor, Mamunur Rashid, Senior Lecturer, BRAC Institute of Educational Development, BRAC University who has been instrumental when it comes to answering all my queries and motivating me whenever I needed, throughout the process. I am also expressing my thankfulness to my dear family, friends and colleagues for being there for me throughout the journey.

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Chapter 1: Introduction and Background

1.1 Introduction

As mentioned by Matthew (2020), education was- and in many ways remains a practice that is reserved for the elite few of the world. Inclusivity on the other hand indicates a concept where all are accepted into settings with no regard to their race, class or abilities. Morelle (2019) resonates while defining inclusivity as all learners, irrespective of their abilities, being observed and stimulated to share and absorb in the same space. Labaree (1997) points out that inclusivity in education plays into the tension between public collective good and private individual good, hence the disparity amongst classes. However, while talking about online education and its treatment of inclusive practices, the variables and disparity is not just real but also very much tangible. In the context of Bangladesh, the immersion into virtual education had been anything but easy largely considering the case of purchasing equipment and getting used to the eccentricities of this new form of sharing knowledge at different levels of education.

A study conducted by Tabassum, Mannan and Ahmed (2021) reveals that during the pandemic in Bangladesh, 88.5% remained engaged with online education at the university level. Of these learners, 69.31% suffered from a poor internet connection and 19.13% of the demographic experienced a lack of logistic support such as the internet and mobile devices. It can be inferred that remaining connected with the education stream let alone incorporating/ experiencing inclusivity during the classes has been all but easy in the context of this discussion.

1.2 Research Topic and Title

The title of the paper exhibits the aim of the study which is to see how inclusivity is preached and practiced in the virtual teaching ecosystem used by teachers as well as the students of the tertiary level in Bangladesh. The use of the word 'virtual' instead of 'remote' further narrows down the focus of these teaching experiences to live facilitation of teaching and learning. The title is therefore narrowed down to 'Inclusivity in Virtual Teaching: A Tertiary Level Exploration of Inclusive Practices in Virtual Teaching in Bangladesh'.

1.3 Statement of the Problem

Billah (2017) argues that a successful education should cover a wide range of courses and foster critical thinking as well as teamwork and independence. Classrooms that demonstrate inclusive practices have a significant impact on the lives of the beneficiaries, their families, and the community as per the study conducted by Juan (2018) in the Sama-Bajaos tribe from western Mindanao, Philippines. Teachers play an instrumental role when it comes to the facilitation of these practices and therefore, without their interest to promote inclusive classroom culture even during the virtual teaching and learning may deprive the beneficiaries, families and the community as per the discussion and inference. The problems and challenges are not identical and in no way can be investigated through the same participant or tool. It is comprehensible that the range of investigation has to be extended beyond the student and teachers. The university administration among the stakeholders must also be scrutinized to get to the bottom of this problem.

1.4 Research questions

a. What is the perception of tertiary-level teachers towards promoting inclusivity in virtual teaching?

b. What steps did Bangladeshi tertiary-level teachers take to practice inclusivity while conducting virtual teaching?

c. What were the barriers to building inclusive virtual classrooms at the tertiary level?

1.5 Purpose of the study

The Bangladeshi education system has been suddenly forced to shift to virtual teaching platforms since the sudden pandemic has paved the way for many uncharted territories for the teachers as well as the learners. The study aims at developing an understanding of the effort, perception, and experience of teachers while promoting inclusivity at the tertiary level of education in Bangladesh. Furthermore, the study intends to try and find out the challenges which were faced by teachers while trying to build inclusive classrooms within virtual education.

1.6 Significance of the study

Bangladesh, even today, remains among the countries still in its infancy when it comes to incorporating virtual teaching tools in grassroots-level education even two years after a pandemic wiped across the globe. The prime reason for the study is to explore the experience of teachers promoting inclusivity while operating these as tools for teaching at the university level. A recent study by Islam et. al. (2020), conducted at the tertiary level in Bangladesh, reveals that only 55.3% of the students claim to have access to a laptop, PC, or tablet to attend virtual classes. 44.7% of the students are suffering from a lack of logistics and cannot attend virtual classes. The study also finds that 55% of the students cannot access a stable internet connection to continue their participation at

different distance learning platforms of the level. The data from the study should reveal greater depths of information regarding the context behind this predicament, after a thematic analysis. This focus should have a decisive impact on the formation of research findings that should reveal the keys to creating an inclusive education infrastructure in the country. Furthermore, the study aims to reveal whether the teachers are likely to prefer inclusive virtual teaching instead of physical ones, which may, in turn, create an influx of virtual teaching platforms in Bangladesh, reshaping the teachinglearning experience for the context. Understanding the orientation on this should indicate the possibility of reshaping and rethinking inclusive tertiary teaching practices in Bangladesh.

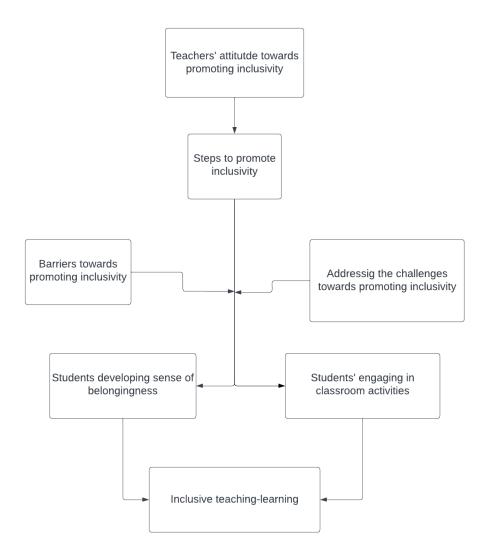
Chapter 2: Literature Review and Conceptual Framework

2.1 Literature Review

The Salamanca Statement on Principles, Policies and Practice in Special Needs Education propagates educational institutions as one of the most effective tools for "building an inclusive society and achieving education for all" (UNESCO, 1994, p. 3). Richardson and Powell (as cited in Krischler, 2019) maintain that inclusive education has turned into an intensively explored idea and pedagogical reform project around the world, despite the education structures differing from each other based on contextual realities. In a study at the primary level, of the 429 learners experiencing minor disabilities and the 606 students not experiencing any form of disabilities who participated, those without experiencing any disability in inclusive settings outperformed those in traditional (non-inclusive) settings in reading and math. (Cole et al., 2004, pp. 136–144). Online tools, despite being encouraged to be used on an institutional level by state authorities and education regulatory boards, might not be appropriate in many contexts to promote inclusivity especially due to the variation of material resources and operational knowledge. There are cases where "using online tools

may even hinder learning as such. These are the cases where face-to-face instruction is essential or where learning is invariably interconnected with a workplace environment" (Sudicky & Zounek, 2013, p. 62). According to Sudicky and Zounek (2013), those disadvantages may become intensified through the disproportionate number of teachers and students in any course offered by institutions. The opportunity to provide individual attention through tutoring and support is also scarce from the teachers in such scenarios. Furthermore, as noted by the study, regrettably, many teachers are observed to be struggling to get the basic operations complete in the technological tools let alone extracting the most out of tools such as Microsoft Teams, Zoom, and Google Meet. With such a misalignment of skills and necessity, there might likely be resistance from the teachers' side to use any of the aforementioned tools to conduct virtual teaching for their students. "Very few people are apt to try new things while they are getting a good level of output from the older ones" (Mahmud & Gope, 2009, p. 158). According to the survey data collected by Mahmud & Gope (2009), 60 per cent of students have very little familiarity with the instruments of e-learning. Other than those aforementioned issues, namely, the absence of a learning environment and operational knowledge, direct costs involved with such procedures, etc. are matters of concern as well. Because of the conversion costs (equipment, skills), "planning the implementation of new systems and skills is a precarious exercise" (Islam & Selim, 2006, p. 7). Barker et al. (as cited in Bratko & Kushevska, 2020) note, "universal education system did not work well in America with its social contrasts, and the transition to distance learning only exacerbated the inequality because everyone has different technical and financial capabilities."

2.2 Conceptual Framework



In the conceptual framework, the steps to promote inclusivity are shown as a dependent variable that relies upon the teachers' perception of promoting inclusivity. Students' sense of belongingness and engagement both depend on the steps taken to promote classroom inclusivity. Barriers and how the barriers are addressed the function as external variables that contribute towards the moderation of

the following dependent variables. Inclusivity has been "sometimes envisioned as the deliberate and self-conscious structuring of whole-school and classroom environments so that they are accessible and congenial not only to students with impairments but also to those who can face exclusion or disempowerment due to their ethnicity, social class, gender, culture, religion, immigration history or other attributes" (Kirschner, Suzanne, 2015, p. 2). In the study 'inclusivity' is similarly seen in a broader spectrum that not just considers the impairment but also considers the role of variables such as social class, gender, ethnicity, culture, and religion. The study's conceptual framework is limited to classroom teaching practices and will not incorporate the relationship between the practices and entities such as the government. The study is based on the principle that teachers' mindset toward classroom practices does very little to a lot while building and incorporating inclusive virtual classroom teaching-learning practices.

Chapter 3: Research Methodology

The section shall shed light on the research approach, research site, participants and sampling procedure with rationale so that all the factors behind producing research data are made comprehensible. The section discusses credibility and rigour in different capacities. At the conclusion of this chapter, more ethical issues and limitations have been covered.

3.1 Research Approach

A qualitative approach has been employed as the investigation method, if altered to quantitative, might result in missing information on depths of important variables that may prove decisive in formulating and verifying hypotheses. During the class observation stage, qualitative data has been sought and further interviews were conducted to seek greater depths of information from the research participant's end and perform data triangulation.

Maxwell (2013) (As cited in Almeida, 2016) advocates "qualitative research works with the universe of meanings, motives, aspirations, beliefs, values, and perceptions, which corresponds to a deeper space of relationships, processes, and phenomena that cannot be reduced to the operationalization of variables." The data should also open possibilities for in-depth reflection on how inclusivity has been practiced so far alongside the perception toward inclusivity by the majority of stakeholders.

3.2 Research Site

All two educational institutions where the study shall be conducted are located in the capital of the country. The institutions hold the reputation of running educational services for a minimum of twenty years. One institution is privately funded while the other is a publicly run university. All the universities in relevance have been running their synchronous teaching operations through Google Meet, Zoom, and MS Teams.

3.3 Research Participants

The participants for this research include ten tertiary-level teachers and ten students. Separate questionnaires have been utilized in the two categories. The teachers invited to join as participants have been verified to have at least twelve months of teaching experience at the tertiary level. Of the ten teachers selected for the study, six were male and four were female. The teachers from the tertiary level belong to the age range of twenty-eight to thirty-six years old. Of the ten students, five have associated themselves as male and the other five associated themselves as female. The student's academic range has been from the third semester to the seventh. All the students fell into the twenty-two to twenty-six age range. The study also incorporated observations from three classes held virtually at the tertiary level. Two of these classes have been from a public university and one has been from a private university.

3.4 Sampling

Purposive sampling had been adopted in the paper so that institutions better reflect the ground reality and are equally represented. Murphy (2018) suggests using stratified random selection to choose a sample group that most accurately reflects the whole population for a study. The institutions have been selected randomly, and so was the case for potential participants. Furthermore, the importance of being available, wanting to engage, and having the capacity to communicate one's thoughts and feelings honestly and reflectively had been upheld by Spradley, J. P. (1979).

All of the participants in this study gave their complete consent and were eager to discuss the specifics of their experiences. The participants included for their capacity as teachers had at least twelve months of experience with online teaching. The student participants have been selected on the same basis. Of the three classes visited, consent was sought for each of these and of the three classes, two were taken by male teachers and another by a female teacher.

3.5 Piloting

Berg (2009) recommends a pretest before primary sets of interviews. An instructor from a private institution was invited to participate in the research's pilot interview. The suitability of the interview criteria was confirmed in this interview. The participants' comprehension and ability to reflect on the questions were also evaluated. All of the inquiries had been understood and addressed by the teacher. The participant's opinions and views were gathered. To publish it as an article, the participant requested that his or her identity remain anonymous.

3.6 Data Collection Method

A one-on-one interview, according to Coughlan (2009), is a great tool for gathering extensive information such as the viewpoints and experiences of participants. The study had intentions to

gather detailed information regarding the inclusive practices at the tertiary level and the perception possessed by the various stakeholders. Andersson and Ohlem (2005) reinforce the idea as they demonstrate how one-on-one interviews may be utilized to learn and understand the personal meanings and experiences of participants. That is why the study's research design suits the deep investigation style followed in interviews. Other than that, three classes have been observed through the course of this study to understand the data from a more objective point of view and triangulate information.

A total of twelve teachers had been invited for the interviews and of these, ten were finally able to attend the one-on-one interview sessions. All participants received a permission form that detailed the study's goals and safety procedures. The time and dates for the interview were set only after obtaining consent and considering their availability. According to Tod (2006), one of the interview structure's major advantages is its adaptability. To ensure that respondents feel comfortable expressing their perspectives, the interviews were kept as informal as possible. All of the participants had the autonomy to skip any questions they were uncomfortable with or to end the interview session altogether. According to Trochim (2005), more delicate questions should be saved for a point when familiarity and confidence have been built and the respondent is at ease. Sensitive items like 'challenges' were therefore asked later in the chronology only once when trust and credibility were ensured. Despite thirty minutes being planned initially for the interviews, more than fifty minutes have been taken for the major portion of these interviews. In light of their individual and collective experiences related to each subject of this research, all participants wished to provide a variety of information. The themes and subthemes emerging from research questions and other major queries were used to code each interview once it had been recorded, transcribed, and coded.

3.7 The Researcher's Position

Throughout the study, the researcher worked solely as a student of the master's program and as a researcher from the BRAC Institute of Educational Development. The researcher participated in the primary data collection for this study from March 7 to May 4, 2022. According to Legard et al. (2003), the interviewer's demeanor is quite significant. The interviewer's responsibility is to make sure the subject of the interview feels safe and unthreatened. The researcher explained in great detail to the participants what his role had been in the research and why they were involved in it to keep everyone on the same page during the talk. The researcher conducted interviews to gather data. When interviewees expressed difficulty, the researcher went into great depth to clarify the questions. Their comments had been captured on tape. Following listening to the audio, the replies were documented according to each question.

3.8 Data Analysis

The respondents' reactions to the data analysis in this research have been analyzed by employing a thematic analysis. According to Clarke and Braun (2006), thematic analysis is an attempt to locate, analyze, and examine themes underlying qualitative data. The themes are typically used as the foundation for a framework that organizes and summarizes the researcher's analytical findings. In this study, the research question and key questions were divided into ten sub-themes (teachers' perceptions, teachers' approaches, institution's support, additional support, teachers' challenges, students' perceptions, students' experience, students' challenges, teachers' solutions, and students' solutions) and three main themes (perceptions, challenges, and solutions). According to Selvam and Collicutt (2013), qualitative researchers frequently choose thematic analysis since it places a focus on thorough and high-quality data analysis. Clarke and Braun (2017) claim that, the theme analysis

technique provides flexibility concerning the research topic, data collecting strategy, sampling, and methods of meaning development, among other things. As argued by Khaldi K. (2017), triangulation is an important paradigm in any research article and therefore cannot be ignored. Class observation data has been coded for thematic analysis as well, therefore.

3.9 Ethical Issues and Concerns

According to Coughan (2009), the protection of interview subjects is a crucial component of carrying out an interview, and the concerns of informed permission, anonymity, and secrecy are crucial. The identities of participants have not been disclosed and the letter 'T' has been used to present findings from the teachers whereas, the letter 'S' has been used to present the findings from the students. Other than that, this study raised some ethical challenges and concerns, including obtaining consent, participant anonymity, and comfort with the interview questions. All research participants received not just a consent form but also a thorough explanation of the informed consent form, following Coughan's (2009) guideline to obtain consent for participation. Before confirming the participation, concerns such as the study's goal or the researcher's role were addressed and explained.

A handful of the questions, however, may have made people feel uneasy as they responded. In light of this, the interviewees were completely free to avoid any questions they felt uncomfortable answering. Apart from these, the participants' privacy was protected, and they had been assured that neither the study publication nor the public would reveal their names. To discover the outcomes and eliminate any bias in the data collection, every interview was recorded and afterwards transcribed. Before the beginning of the data collection, a request for ethical permission was made to BRAC University and approval had been received.

3.10 Credibility and Rigor

According to Lincoln and Guba (1985), qualitative studies should demonstrate credibility, dependability, confirmability, and transferability. The study makes effort to meet the requisites.

3.10.1 Credibility

Credibility, as defined by Polit and Beck (2012), refers to the accuracy of the data or the participant's perspectives and the researcher's interpretation. The researcher documents his or her interactions with the participants to confirm the research findings. According to Sandelowski (1986), the research can be regarded as trustworthy if the representations of human experience are instantly identified by those who have had a similar qualitative study encounter. The participants were given entire freedom to respond to each question with genuine and in-depth views based on their understanding and actual experiences. Based on their previous teaching and learning experiences at various tertiary institutions in Bangladesh's developing setting, it was simple to identify the experiences they shared.

3.10.2 Transferability

Transferability is proven, in accordance with Houghton et al. (2013), when study results may be used with other groups or circumstances. The results are more likely to be transferable when readers can relate them to their own experiences. According to Sandelowski (1986), the goal of a qualitative study can only be significant if it aims to generalize the subject. The background, methods, and conclusions of this study were in line with tertiary-level inclusive practices. As a result, readers who engage in or wish to learn more about the inclusive practice at the university level in developing contexts, such as Bangladesh, will be able to recognize or connect with a comparable circumstance.

3.10.3 Dependability

According to Tobin and Begley's (2004) study, dependability refers to the data's consistency under similar circumstances. When a different researcher agrees with the choice made at each level of the study process, this can be obtained. On the other hand, Koch (2006) contends that if the study findings were duplicated with similar participants under similar circumstances, qualitative research may be regarded as reliable via the researcher's method and descriptions. An outside researcher has received a consistently conducted, examined, and presented study. The external researcher agreed with the study process's decision-making steps. An esteemed educator from the BRAC Institute of Educational Development frequently observed and oversaw all of the research study's methods. As an external participant in this study, a different faculty member from the BRAC Institute of Educational Development had been present.

3.10.4 Confirmability

According to Polit and Beck (2012), confirmability refers to the researcher's capacity to show that the data accurately reflects the replies of the participants and is free of the researcher's prejudices or perspectives. By demonstrating how inferences and interpretations have been created, confirmability may be proven. Researchers can provide evidence that the conclusions came straight from the data. Rich comments from the respondents that illustrate each study subject might be used to illustrate this. Without any prejudice, the replies from this study have been captured and transcribed. Additionally, for consistency and explanation, the conclusions and statements from the respondents have been included beneath each subject.

3.11 Limitations of the Study

The study has been conducted only at the tertiary-level institutions of the capital of Bangladesh. Incorporating other districts and levels might reveal deeper levels of data regarding the inclusive practices at the tier. Furthermore, any future study in the area might benefit from incorporating other stakeholders such as representatives from the government, parents' associations etc.

Chapter 4: Findings

4.1 Findings

As per the findings, the students and teachers both have limitations when it comes to creating or experiencing a sense of belonging in virtual classrooms. The teachers identify the workload and the number of students are not conducive to any attempt at promoting inclusivity at the tertiary level. The students also feel that the time they get from their teachers is inadequate and there are active biases that dictate the overall classroom atmosphere in the developing tertiary context of Bangladesh. Whereas the teachers receive support from the institution such as training and subscriptions, there are other stakeholders including- parents and outside organizations helping them grow as facilitators at the tertiary level. Private-funded universities show the demonstration of accountability through student feedback but that seems to be lacking in universities run by the public fund. The students and teachers both seem to be eager to find time outside class to make up for the missing sense of belonging during class time.

The response received from the participants and observations from the class visits have been categorized into the following themes and sub-themes:

4.1.1 Teachers' Perceptions

4.1.1.1 Teachers' Perceptions Towards the Promotion of Inclusivity

The teachers feel that inclusivity should be maintained in all forms at education and all levels. One teacher (T4) from a private university in Dhaka states-

The teachers here want to make classes inclusive. They want to make sure that all students participate and engage in all classroom activities.

Another teacher(T2) from a public-funded university maintains-

Inclusivity is still being implemented at the different levels of the country. You may talk of this in cities like Dhaka but the rural areas would not have any clue regarding such concepts. However, classrooms should be inclusive regardless of the socio-economic scenario of the institute.

4.1.1.2 Teachers' Approaches

The teachers seem to have a firm interest in making their classes inclusive. One teacher(T3) states-

I cannot see my students when I take my classes virtually. Usually, I know when my student did not understand something, by just taking a look at their face. I usually try to engage them by randomly calling their names at different points and asking them to repeat what they understand so far in the class. Sometimes there are responses and sometimes the room (Google Meet Platform) remains silent.

Another teacher with seven years of experience states-

I try to engage them through different platforms such as Quizlet and Edpuzzle (learning aid websites). They help me keep the learning strategies fresh and evaluate the mastery of different competencies.

The claims get verified during the class observation whereas it has been noticed that-

The teacher starts the class by asking the student to repeat what she remembers from the last class. The teacher is not satisfied with the answer and moves on to another student for a more precise answer...... The teacher asks the student to open the Kahoot website on their devices and answer a few questions. Some students face trouble getting into the platform. The teacher has to move ahead with the task without having everyone participate...

4.1.1.3 Institution's Support

The institutions are supportive of building inclusive classrooms. There are places of accountability in the privately funded universities where the study was conducted. Talking about the support structure, one teacher mentioned:

The institution always motivates us to engage all the students in the classroom. At the end of each semester, they hand the students evaluation form where they have questions relating the teachers' intent to engage students and make the classes participatory. The institution has subscriptions from the 'Blended Learning Center' (LMS- Moodle) and they make sure that we have access to different tools and integrations at our disposal.

One teacher from a public-funded university mentioned

We have a specific policy governing the classes and they help us build inclusive classes. However, that is not always the priority in virtual classes. With students from a diversity of backgrounds, there are plenty of variables to think about when it comes to approaching inclusivity.

During the class observation, it has been noticed that-

Classes are being recorded in Google Meet. The teacher(T7) mentions that these will be shared with the students later so that they can check on these if they missed out any part due to network abnormalities.

While being asked later regarding the recording and whether the institute monitors classes, one teacher(T4) replied-

Sometimes they do. Sometimes they do not. We are asked to submit the recordings nevertheless. If there are major issues, they may choose to point it out later.

4.1.1.4 Additional Support

In the context, parents are expected to play the role of purchasing logistics that would enable the learners to engage in virtual education. One teacher(T1) had this to say regarding the support they are getting from the parents-

The parents are usually very supportive and they want their children to get included in the class. However, I sometimes had parents sitting there with the students to see what is being taught and them talking to me sometimes regarding what could be modified. We did not see such involvement before the pandemic. Now the parents are ensuring that the learners are being asked to participate in the class, being assessed strictly etc.

While talking about additional supports, one teacher(T5) had to add-

There are a lot of organizations currently working with such concepts these days. I have just attended a workshop last month where they talked about capacity building, making classes more interactive and engaging. These initiatives have government support as well.

4.1.1.5 Teachers' Challenges

While talking about the challenges, the teachers pointed out the economic reality and the workload of institutions. One teacher(T5) mentioned-

The students come from different financial backgrounds. Some even have trouble purchasing data plans and cannot come to class. How do I ask them to interact? How do I ask them to show their faces when they do not even have data to join the class?

Another teacher(T2) from a privately funded university stated-

From the beginning of the pandemic, all teachers here are taking additional credits to manage the cost efficiency of the institution. That is the case in other institutions as well. With so many extra students and scripts, sometimes the classes have to be conducted unprepared or underprepared. Sometimes multiple sections are merged as you do not have to make sitting arrangements in virtual classrooms. It is difficult to build inclusive classrooms like that.

During the class observation, the following has been noticed-

The class has 56 attendees including the course teacher(T7) and the researcher. The students' numbers and the responses do not add up. There are only 6 responses when the teacher asks the students to share their opinion on something she had said.

4.1.2 Students' Perceptions

4.1.2.1 Students' Perceptions Towards the Promotion of Inclusivity

The students tend to be engaged more in the classes when their opinions are taken into account and they are invited to share their thoughts on something. One student(S2) said-

We want to feel included. The teachers who ask for our opinion are always the most popular ones. In some classes, we are asked to think about some issue and present our analysis of something. That does not happen in all the classes though. Sometimes it gets boring and we do not feel like our presence matter that much.

4.1.2.2 Students' Experience

While asked about the students' experience during the virtual teaching, it is seen that the experience is often mixed with different feelings. One student(S6) from a public university said-

Our classes are better in a way. We get to stay in our room and learn new things. But, at times, there are a lot of issues. We do not feel like talking with the classes or sometimes get distracted with the things we have to do at home. Sometimes we feel like we do not get enough time to ask questions.

After being asked about any bias another student(S8) mentioned-

I sometimes feel teachers tend to talk more with the students who are more popular and vocal.

They often get more attention than the rest of the students. This helps them get clarify any confusion they may have.

While asked about how such biases make them feel, one student(S7) added-

I do not know. It feels bad sometimes. And sometimes you feel relieved that you do not have to answer something and you can excuse yourself during the class.

4.1.2.3 Students' Challenges

Some students pointed to the number of students they have per class and some talked about not being able to connect with the teachers in person or emotionally. One student(S3) said-

We have so many classmates. The teachers may not always find time for all of us.

Another student(S2) mentioned-

We cannot see the teacher. Even if some choose to show their faces, we do not get to see the gestures and do not get additional time with them like we did previously outside classes. They often feel like strangers therefore.

During the class observations, the following has been noted-

The teacher has kept her camera on throughout the class. She invites multiple students to share their understanding. There was a lack of response initially. Later a student(S3) responded. It was after 4 minutes that this had happened.

4.1.3 Solutions

4.1.3.1 Teachers' Solutions

The teachers tried to negotiate with the course allocation to manage stress and organize separate sessions to provide counseling hours to the students. One teacher(T2) mentions-

The class time is not going to be adequate and I knew about it. That is why I would always have them receive an appointment so that we can talk over Meet and reduce communication distance.

The teacher(T2) also states-

I would always be trying to take the same course with multiple batches so that the class preparation time can be reduced and I can make the classes more inclusive by giving students more time to explain and express themselves.

Most of the teachers also provided class recordings so that the logistic limitations and problems could be mitigated from the students' end. One teacher(T7) mentions-

I always provide my class recordings to the students. They can then go on their free time and learn any part they missed during the class.

4.1.3.2 Students' Solutions

The students would request the teachers for extra classes and counseling hours. One student(S3) from a private university state-

We would request the teacher to take some additional sessions so that we could catch up on any part we missed during the class. Counseling hours also helped our cause.

Another student(S10) from a public university had something else to say on this-

We could not find time outside the class with our teacher. I requested one earlier to grant me time and an explanation for some of the lessons I did not understand. Though he agreed initially, he was nowhere to be found later.

Chapter 5: Discussion and Conclusion

Attached to this section is a commentary that is consistent with the literature review. The research's major topics and subthemes have served as the foundation for organizing the conversation. At the end of this chapter, a few suggestions have also been included.

5.1 Discussion

The results show that the main obstacle to the widespread adoption of inclusive education is instructors' views about it. (Schlessinger, 2018) Therefore the perception of the teachers is a crucial part when the developing tertiary context of Bangladesh is considered. The tertiary level teachers, in response to the first research question regarding their perception towards inclusive practices in the classroom, reveal a positive perception when it comes to the adoption of inclusive practices in their virtual classrooms. However, they feel that there is a disparity in inclusivity between rural and city-level execution of tertiary-level education.

The responsibility of promoting inclusivity demands profound knowledge and creativity while addressing the needs of all students. The teachers participating in the research mentioned that they have received training on the matter and there are instances of them incorporating different technological tools in the virtual classrooms to make these classes more inclusive. The capacity to sustain these practices on an individual level and to disseminate inclusive education may depend on giving instructors access to an academic community and helping them navigate through an exclusive environment. (Schlessinger, 2018) The teachers in the study also feel positive that there is adequate support when it comes to the institution's role in buying a subscription and using different tools in the institutes. However, according to the teaching participants, lack of consideration when it comes to the workload makes it difficult for the teachers to utilize the institutional support to the full extent. Studies also show that once instructors participate in professional development programs, there is an increase in their preparedness to

modify the learning environment for more inclusion from the baseline to the postassessment. (Leifler, 2020) The teachers from the study reveal that different organizations are working with them to promote such practices in the classroom. Parental support also came up when they have been discussing the additional support they have been receiving.

From the students' viewpoint, they take notice once they are invited to feel a sense of belonging in their classes. They consider this to be a significant aspect of education at the tertiary level, going by the reflections emerging from the findings of this study. Students view cultural understanding, the appearance of inclusiveness, and the gap between theory and practice as obstacles to creating inclusive classrooms. (Metzger et al., 2020) The students noticed that there are biases towards students who tend to respond more during class activities. Because participation in advanced math and science courses in high school is a requirement for post-secondary study in engineering, computer science, and other fields, teachers' biased conduct during the initial stages of education has long-term ramifications for career choices and incomes at maturity. (Lavy & Sand, 2018) They also feel that some of the teachers fail to give them adequate time or motivate them enough to engage in classroom activities.

When it comes to the research question of steps taken by the teachers, it appears that they have worked towards negotiations with the institutions so that they can manage a decent workload which will enable them to make their teaching more inclusive and practical. The teachers also claimed to utilize the compliances and policies set by the tertiary level institutions so that classrooms can be established and sustained as bias-free inclusive contexts in both public and privately run universities of the country. The teachers also seem to work closely with parents to make their classes more engaging and inclusive based on the findings from the study.

In terms of the barriers to building inclusive virtual classrooms, the challenges included both physical and social variables that need to be addressed if inclusive practices are to be incorporated at the tertiary level of education. Teachers encounter a variety of difficulties as a result of COVID-19's severe disruption of in-person learning environments. (Toquero, 2021) The teachers pointed out that the workload and the financial disparity among the students' families make it difficult for teachers to build inclusive classrooms. Although we can claim that the institution's conversion to virtual classrooms from face-to-face instruction was effective, students and instructors nevertheless faced challenges and drawbacks when using platforms for online classes. (Contreras et al., 2021) The students faced challenges such as not getting attention due to large class sizes. Other than that, they also confessed of having felt that there were psychological distances between the teachers and them due to the lack of face-to-face interaction in various cases.

5.2 Recommendations

Considering the findings from the participants' opinions as reflected within the data, the following could be implemented to build inclusive virtual classrooms at the developing tertiary level of Bangladesh.

-The universities could ensure accountability to ensure accountability at all levels of educational institutions.

-The government and non-government organizations could work towards capacity building at both the rural and city levels of tertiary education.

-The institutions could rethink the workload for teachers so that their time and energy can result in higher quality education.

-The teachers could ensure face-to-face counseling sessions following the safety measures to have better engagement and connection with the students.

-The students could attempt more to get engaged with the classroom activities so that they do not have to put heavy reliance on the teachers' flexibility to arrange counseling sessions.

5.3 Conclusion

Bangladesh is a unique case where there are limitations with resources but interest towards achieving excellence at all levels of education. The study has revealed significant room for improvement at the execution of education practices when it comes to making tertiary-level education more outcomeoriented. Better cooperation among the institutions, government bodies and non-government organizations is likely to result in a more acceptable output when it comes to ensuring quality tertiary-level education at the developing context of Bangladesh.

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Appendices

Appendix A: Consent Letter

Title: Inclusivity in Virtual Teaching: A Tertiary Level Exploration of Inclusive Practices in Virtual Teaching in Bangladesh.

Dear Respondent,

Greetings!

I am, Munshi Nazmus Sakib, a Master's degree student of BRAC University, here with you for my thesis purpose and seeks your cooperation. My thesis title is " Inclusivity in Virtual Teaching: A Tertiary Level Exploration of Inclusive Practices in Virtual Teaching in Bangladesh." In partial fulfillment of my Master's degree, I must prepare a research monograph. For this purpose, I'm undertaking the above-mentioned research project. In this respect, I seek your generous co-operation and you are cordially requested to answer these questions. Note that all the information your identity will be kept strictly confidential and your kind response will be used only for this academic research. If you feel uncomfortable answering any question, feel free to skip it. But you are requested to provide the correct answer according to what you believe.

Thanks in advance

Munshi Nazmus Sakib

M.Ed. Student, BRAC University.

I have read the above and discussed it with the researcher. I understand the study and agree to participate.

Signature and date

Appendix B: Observation criteria

Observable behavior	
The teachers' invitation for the students to participate in classroom learning.	
The teacher incorporation of interactive tools such as Kahoot, Mentimeter, and EdPuzzle to	
ensure participation.	
The students' engagement in classroom discussion.	
The teachers' demonstration of bias towards any of the students.	
The students' feeling of belongingness in the class and their urge to participate	
Teachers' encouragement for the students who are responding less.	
Teachers' encouragement for the students who have unstable connections to respond later	
when their connection is stable.	

Sl.	Question
1	How would you define inclusivity at the tertiary level of education?
2	What is your opinion towards the incorporation of inclusive practices in tertiary level virtual classrooms?
3	How would you describe inclusive practices that you follow when you teach virtually at the tertiary level?
4	What are the steps you took to promote inclusivity in your classrooms?
5	What kind of support are you getting to promote inclusivity in your class?
6	What challenges did you face while promoting inclusivity in your tertiary level classrooms?
7	How did you overcome those challenges?
8	Is there anything else you would like us to know?

Sl.	Question
1	How would you define inclusivity at the tertiary level of education?
2	What is your perception towards the incorporation of inclusive practices in tertiary level virtual classrooms?
3	How would you describe inclusive practices that you see being followed when you are learning virtually?
4	What are the steps you found to be taken to promote inclusivity in your classrooms?
5	What challenges did you face while you try to engage yourself in tertiary level virtual classrooms?
6	What are the challenges that you did not face but other students are facing in your class?
7	How did you overcome those challenges?
8	Is there anything else you would like for us to know?

Appendix D: Interviewing questionnaire for the students