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RESEARCH ARTICLE

KNOWLEDGE, ATTITUDE AND PRACTICE OF ONLINE LEARNING & TEACHING: A CROSS SECTIONAL STUDY ON STUDENTS' AND TEACHERS' PERSPECTIVE

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ABSTRACT

Introduction: To lower the infection rate of SARS-CoV-2, public gatherings are discouraged by the personnel of scientific communities and so educational institutions are closed for being the meeting place of so many students. To continue the education, most of the countries took the decision of teaching-learning through online. But all the countries could not be benefitted completely because of lacking computer knowledge and technical issues. Bangladesh is among them and this study was conducted in the Chattogram region of the country. **Materials and method:** Data was collected from 300 students and 100 hundred teachers of different educational institutions ranging from primary schools to universities and then analyzed on Excel platform. **Results and Discussion:** The findings present how attitude, motivation, self-efficacy, and use of technology play a significant role in giving and receiving lessons for academic performance of students and teachers. Also, participants preferred face-to-face learning over online learning. **Conclusion:** In spite of having many challenges, there is no option to continue education during pandemic except e-learning. So, major challenges should be met and positive attitudes must be grown.

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INTRODUCTION

In today's world, the novel coronavirus (COVID-19) pandemic has become one of the alarming issues. The first human case of COVID-19 was reported in China (1) but the virus has spread rapidly throughout the world. The impacts of this Pandemic have already been reflected in every aspect of human life including education, one of the basic needs of the human being. To avoid gatherings and further infections, schools have been shut down all over the world. The noxious nature of the COVID-19 has also forced the Bangladeshi government to close all the educational institutions since March 18, 2020. This prolonged closure detached the students from their study as well as increased anxiety among them regarding their academic and professional careers. However, with the advent of distance learning through technology, educational practices have changed rapidly. Besides, several distance learning platforms offer free access to their pandemic resources (2). Though online schooling was largely treated as an optional and supplementary means of education during the prior pandemic,

the pandemic situation forced it to grab the position of being the central mode of learning. So, online platforms are started to be currently used by educational institutions to continue the learning process of students (3). When online education first emerged as an alternative of traditional education system, it was hoped that teaching with technology would be more efficient and effective than conventional methods today. In this means, the faculty can teach more students with improved quality by utilizing a new technology. According to UNESCO (4), online learning may bring in a large proportion of 70% student population which are affected due to school closure amid the pandemic. Attitudes of the teachers toward online learning amid schools' switching to online mode due to the Covid-19 pandemic remains pivotal. More important thing is that the increased online use during the pandemic, reported by Limaye *et al.* (5), is perceived to have positively influenced teachers' attitudes towards social media use in online learning. Study argues that technological progress offers at-risk students many opportunities to receive a credit to graduate on time, as

well as giving them different avenues for learning and assessing their learning (6). Existing online learning programs differ from traditional education in a number of significant ways, one of which is the ranks of students served. Online learning programs can serve students of all ages, levels of ability, and learning backgrounds. Remote learning allows students with elasticity and feasibility in where and when they learn. Students have more control in when and how they complete course learning activities. However, the online learning requires diverse qualities of students such as knowledge of technology use, time management and organization, and interaction using online technologies (7). Students who enroll in online courses may have mixed levels of understanding skills, readiness and preparedness that could likely affect the efficiency of the online classes and also their academic excellence (8,9). In spite of having many opportunities and advantages, the expected success of online education cannot be ensured in remote areas of the developing countries like ours. Academic leaders are reporting that it takes more time and effort for teaching staff to teach online courses rather than teaching appropriate face-to-face courses (10). None can deny that online learning requires more faculty efforts to encourage improvements in the use of online learning media than just face-to-face instruction. Initially, very few universities of Bangladesh did have the required technological strength or learning management systems. However, the Bangladesh University Grants Commission (BUGC) with the help of Bangladesh Research and Education Network (BdREN) – an initiative funded by the World Bank in 2009 – provided the required facilities to re-start the teaching and learning activities based on online platform (11). It is unfortunate that like other developing and under-developed countries, Bangladesh is still having some problems, such as insufficient technical and infrastructural facilities and lack of training for both teachers and students (12, 13, 14).

The evidence from Bangladesh shows that unstable internet connection remains a major barrier for smooth online class (15,16,17). The sudden rise of both consumers and use of high-speed internet is also stalling the server (18). Moreover, the inability to afford the cost of personal computers and smartphones with necessary gadgets by students largely because of financial constraints, is considered another major setback for online class in Bangladesh (17). The truth is, in Bangladesh around 36.7 % households have the access to internet, and only 5.6 % have their computer facilities (16,17). Besides, laboratory-based lessons and practical classes are quite hazy through online as students can't get hands on skills. In this study, we attempted to present and conclude the attitudes of both teacher and students about online teaching and learning.

MATERIALS AND METHODS

Study Design: The study employed survey design with the focus on obtaining answers to a series of questions which are carefully planned and given out to participants.

Participants: The study covered a number of students and teachers from several educational institutions in the Chattogram region of Bangladesh.

Question type: Questionnaire containing several items was used to gather data from both the students and the teachers on their reactions towards resumption of academic work online.

Number of the participants: A total of 300 students and 100 teachers responded to the survey and data was analyzed using frequency and percentages.

Ethics: The consent of the respondents was taken before the survey, and they remained anonymous. All the participants were informed about the specific objective of this study before proceeding to fill-up the questionnaire.

Participants were able to complete the survey only once and could terminate the survey at any time they desired. Anonymity and confidentiality of the data was ensured.

RESULTS

Table 1. Socio-Demographic Status of the Students (300)

Variable	Sub-scale	Frequency	Percentage
Gender	Male	180	60%
	Female	120	40%
Age group	7-11	40	13.33%
	12-16	60	20%
	17-20	65	21.67%
	21-25	135	45%
Educational status	Illiterate	0	0%
	Primary	40	13.33%
	SSC	60	20%
	HSC	45	15%
	Undergraduate	120	40%
	Post graduate	35	11.67%
Category of institutions	Primary school	40	13.33%
	High school	60	20%
	Higher secondary	45	15%
	Medical college	35	11.67%
	Technical college	0	0%
	University	120	40%
Area of institutions	Urban	228	76%
	Sub urban	54	18%
	Rural	18	6%
Home regions	Hill tract	26	8.67%
	Coast	48	16%
	Flat land area	226	75.33%

Table 2. Socio-Demographic Status of the Teachers (100)

Variable	Sub-scale	Frequency	Percentage
Gender	Male	67	67%
	Female	33	33%
Educational Status	Graduated	18	18%
	Post Graduated	82	82%
Category of institutions	Primary school	20	20%
	High school	25	25%
	Higher	15	15%
	Secondary	9	9%
	Medical college	6	6%
	Technical college	25	25%
	University		
Area of institutions	Urban	67	67%
	Sub urban	25	25%
	Rural	8	8%
Home region	Hill tract	10	10%
	Coast	26	26%
	Flat land area	64	64%

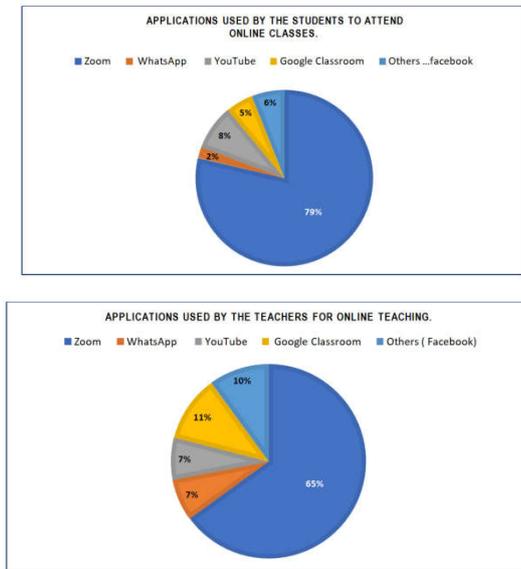


Figure 1. The respondent students and teachers prefer different online media for online learning and teaching. The percentages are shown with the above Pie-Charts

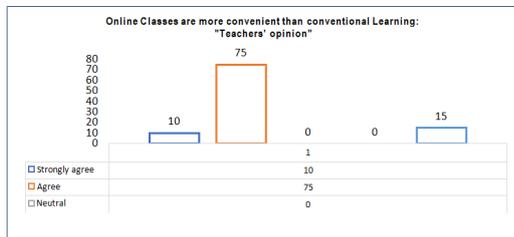
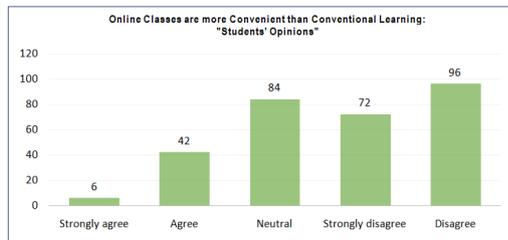


Figure 2. Opinions of both Teachers' and Students' on "Online classes are more convenient than conventional learning"

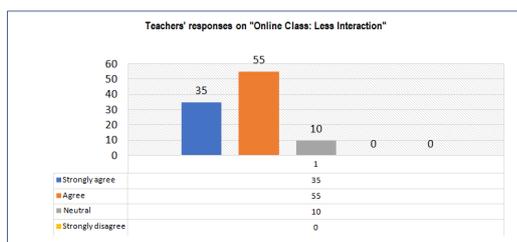
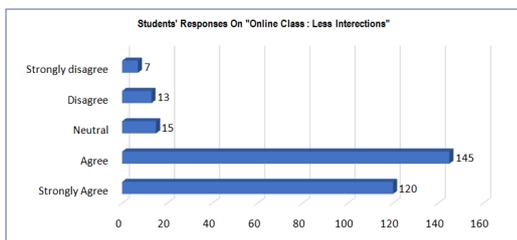


Figure 3: Responses of the Students' and Teachers' on the statement " There is lack of interaction during online classes". Percentages are shown in above Bar-Charts

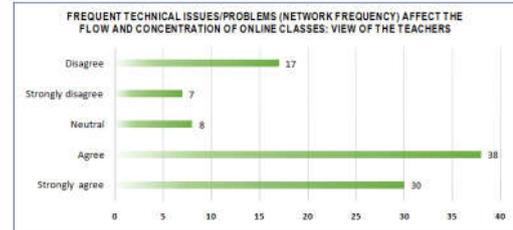
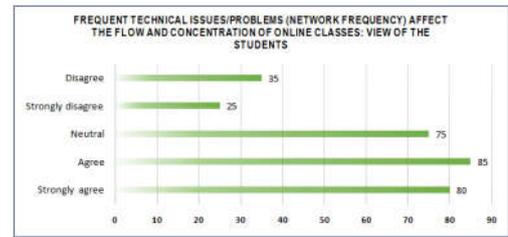


Figure 4. Most of our respondents expressed their opinion that frequent technical issues/problems (network frequency) affect the flow and concentration of online classes. Views as strongly agree, agree, neutral, disagree or strongly disagree were collected. Graphs are showed above

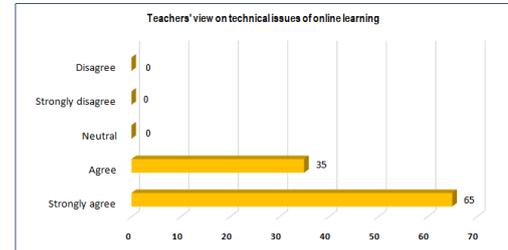
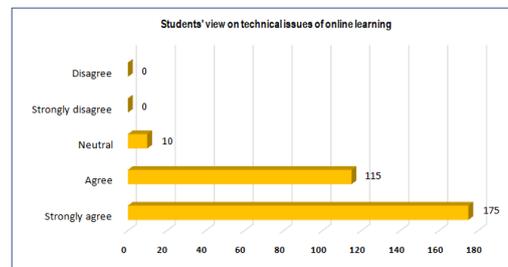


Figure 5. Responses on "Lack of advanced computer skills make it difficult to me to use some advanced tools in online teaching effectively"

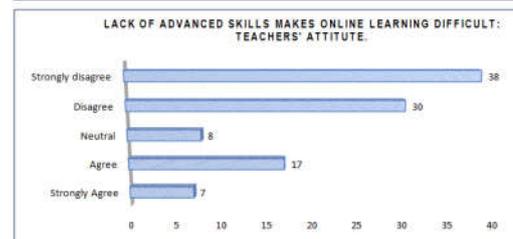
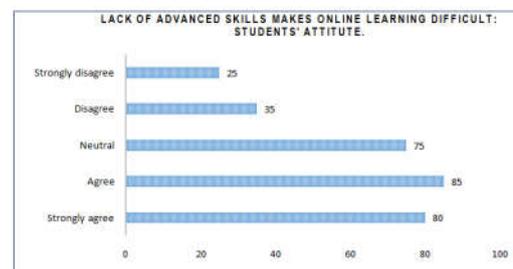


Figure 6: Many of the respondents say that they find online teaching-learning difficult because of the lacking of advanced technical knowledge but some of them are in the opposition

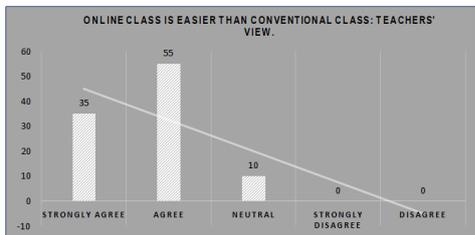
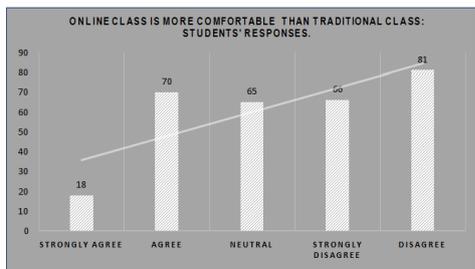


Figure 7. We had a question about the easiness and comfort of online classes compared to the conventional classes. Interestingly, maximum student reported that they do not get online classes comfortable while almost all the teachers say that online class is more comfortable and easier than the traditional classrooms:

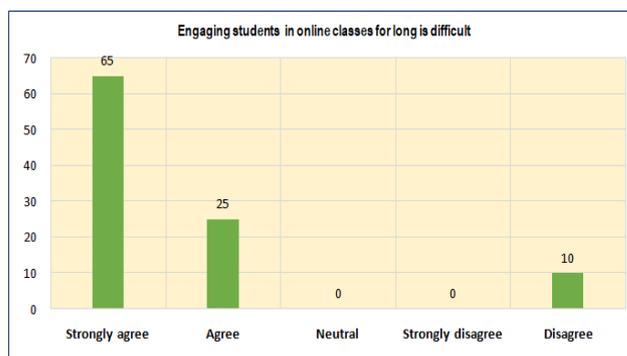


Figure 10. Most of the teachers who responded that it is difficult to engage students in online classes for long:

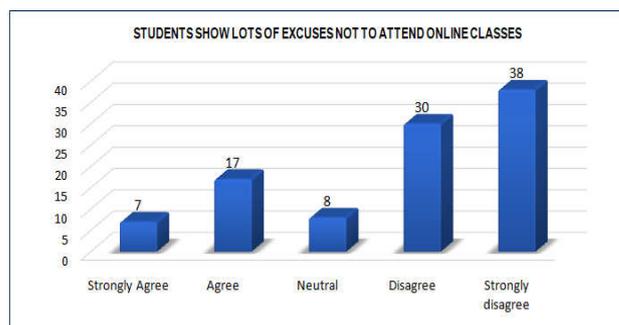


Figure 11. Maximum teachers disagreed that students show lots of excuses not to attend online classes. Rest of the teachers also strongly disagreed with the statement:

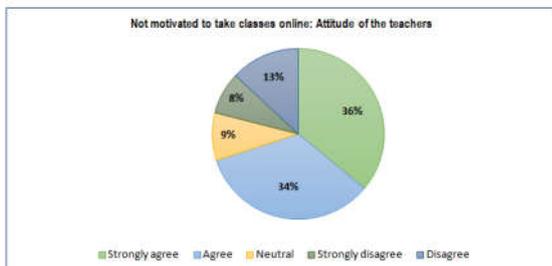
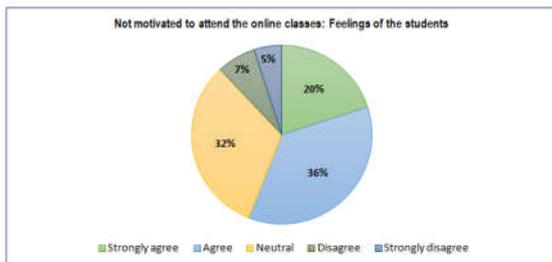


Figure 8. It is reported by many students that they do not feel motivated to attend the online classes regularly. However, a few students say the reverse. In the meantime, most of the teachers also say that they also do not get motivation to take classes online.

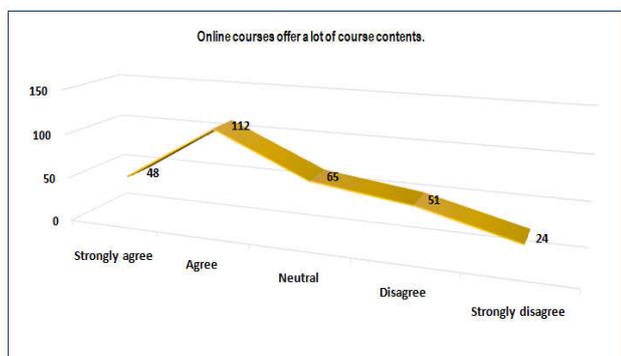


Figure 9. Maximum students agree that online courses offer access to a wide range of course content, resources and supplements

DISCUSSION

The concept of online learning using different modes of technology has become clearer to the world population during the stay-at-home order because of the COVID-19 pandemic. This study aims at the facts that dominate the learners and teachers to accept online education to continue learning and sharing knowledge. Regarding attitude towards the learning delivery method, the qualitative and quantitative data results showed that both the teachers and students prefer face to face learning over online learning. Information and opinions of the teachers and the students were gathered. In this study, there were 60% male and 40% female among the respondent students. Age of the maximum students were between 21 to 25 among whom 40% were undergraduate and 11.67% were in post graduate stage. Junior students also responded. Home regions of maximum students were in urban flat land area but some were from hill and coastal area too. Among the respondent teachers 67% were male while 33% were female. Most of them were post graduated and some were graduated teachers. We gathered responses from the teachers of all kinds of institutions from primary schools to technical colleges, medical colleges and universities. Maximum teachers were from urban areas but some were also from hill, coastal and rural areas. Qualitative data of a recent study showed that after the online learning transition, many students reported that online learning was an unpleasant experience and they expressed a negative attitude towards online learning. It also found that the students not only considered online learning more difficult but also the lack of supporting resources (19). If we notice the figure 2 of this study, we can see that the maximum students do not find the online classes convenient in response to conventional classes.

However, many teachers think that online teaching is more convenient as they can conduct their classes from home. The teachers and the students usually use zoom, you tube, google classroom, what's app etc. for distance learning. Adopting online learning environment is a technical issue as because many students cannot afford high speed internet connection or smart devices (21). Almost all the respondent students and teachers reported that they frequently face the interruption of network while attending the online classes. Besides, maximum students agreed that interaction is far less in the online classes than conventional classes. Many teachers said that they got their students relatively less motivated to attend the classes online. As the outbreak of COVID-19 and closure of the educational institutions was a sudden incident and obviously not preplanned, neither the teachers nor the students were prepared and trained enough to attend fruitful online classes. Thus, a common problem of both the teachers and the students that they lack of advanced computer skills and so it is difficult to them to use some advanced tools in online teaching-learning effectively. So, ensuring a proper environment is not only a technical issue but also a pedagogical and instructional challenge (20). It is important to train students in new technologies before they are used. Many students responded that they were offered a lot of course contents, learning supplements etc. while some were in the opposition as they could not go the library, did not get reference book and could not share their hand notes. Most of the teachers opined that it was very tough to engage their students in the online classes because they(students) showed a lot of excuses not to join classes online. Previous study also showed that students do not pay attention to the research class (22). The main factors behind the irregularity problem of the students are unstable internet connection and electricity (23). We found that proper assessment of the learning is not easy in case of online classes as students have many excuses not to attend spontaneously. This finding is supported by other researchers too (24). It mentioned that formative and summative assessments are major challenges of online classes.

In spite of having a lot of challenges, the shift from face-to-face lectures to online classes is the only solution to continue the learning process in pandemic period. Indeed, academic institutions would not be able to transform all of their college curricula into online resource overnight (12). Nothing but innovative solutions by the instates can only help to deal with this pandemic (25). On the contrary, researchers concluded that online learning is feasible, cheap and must be part of the postgraduate training (26). We found that many students do not get motivated to join online classes because they not only have many limitations but also, they do not get interest due to less interaction, teachers also admitted that their students are having lack of interest. Enhancing interactivity, use of practice exercise, repetition of study material, and providing feedback are suggested to improve learning outcomes (27). To achieve academic success, students need to be guided in developing self-regulated learning strategies that include time management, metacognition, critical thinking, and effort regulation (28).

Conclusion & Recommendations

Many respondent students expressed their feelings about online education that it is less comfortable to them as they are not experiencing actual learning. Students also from other studies were concerned that they were not learning essential

skills or getting ample patient exposure, a sentiment that is echoed around the globe (29,30). Based on the findings of this study and other studies, online learning can be a helpful way to gather more knowledge but cannot be the only way of learning as a big portion of the population cannot ensure uninterrupted network. However, students and teachers should promote a positive attitude towards a temporary situation to minimize the loss created from the prolonged closure of the educational institutions.

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