Teachers' perceptions regarding technology-enabled learning during Covid-19 pandemic: A study on the BBA Program of Bangladesh Open University

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Abstract:
Technology usage has dramatically been increased in higher education institutions during covid-19 pandemic. However, a question emerges whether the teachers are ready and motivated for technology-enabled teaching learning (TEL) practices? This study aims to identify the teachers' attitude toward TEL and also audit their readiness for facilitating TEL. Also, several aspects regarding the teachers' perceptions about their technological skills, access to electronic devices, and pedagogical skills for technology-based education etc. are also analyzed. A set of structured questionnaires have been administered in the study among the 50 teachers in the BBA program of Bangladesh Open University (BOU). In addition, a focus group discussion with selected teachers and TEL experts was used in the study. For data analysis, descriptive statistics like mean and percentages have been used. Study found that that most teachers of the BBA program of BOU had positive attitude towards TEL during Covid-19 pandemic though many of them has lack of technological skills.

Keywords: Attitude, tutor, BOU, BBA, technology-enabled learning (TEL) etc.

1.0 Introduction:

Since the first report of coronavirus disease 2019 (COVID-19) in Wuhan (China) in December 2019, COVID-19 has rapidly spread worldwide (Zhu et al., 2020). Global pandemic situation has disrupted education system around the world. The world has seen the most extensive educational systems disruption in history in more than 190 countries worldwide. The closure of the academic institutions has impacted up to 99% of the world the student population in the lower lower-middle-income (The Economic Times, 2020). The COVID-19 outbreak shifts face-to-face education to online during the lockdown. This shift helps faculty integrate advanced technological skills in their teaching, which benefit students (Isaeva et al., 2020). During COVID-19, education has been shifted into the techno-economic culture. The shift should associate with plans to reduce this shift's impact on the normal learning process (Gurukkal, 2020). Schools and universities have adopted the strategy of online education during the pandemic. As a result, teachers and students have had to quickly alter their teaching methods, regardless of whether they were experienced in and prepared for online education. Faculty and students encountered challenges such as technology, workload, digital competence, and compatibility. They concluded that education would become hybrid, face to-face, and online instructions (Adedoyin and Soykan, 2020).

Bangladesh has also imposed restrictions on educational institutions which directed technology-based learning. However, Bangladesh open university had continued education facilities through online from the very beginning of pandemic situation. In addition, distance educators are increasingly adopting both synchronous and asynchronous ICT-based modes of communication to enhance distance learning environment. With the use of technology, distance learners are now able to participate in class in real time; interact with their instructor and peers; and access resources at their own convenient time, place and pace. Technology in education makes the whole education system modern and significant. Due to Covid 19 outbreak, uses of technology in education system helps to be comfortable and find-out the weaknesses in application.

Therefore, it is very contemporary thinking to identify the tutor's attitude and motivation for adopting technology-enabled teaching learning. Bangladesh Open University is the solitary university in Bangladesh established in 1992 which provides education in open and distance mode. Good Information and Communication Technology support is essential and plays vital role for open and distance learning. The School of Business (SOB) is one of the six Schools of Bangladesh Open University (BOU). Initially, the School launched its programs for the first time in January 1995. The aims of the SOB are to produce talented manpower through undergraduate and post graduate programs and create new knowledge by researches. The Bachelor of Business Administration (BBA) program was launched by the SOB in the year 2007 to augment the business education of the learners covering wide range of theoretical concepts and principles relating to the business activities. Thus, it is expected that the authority of BOU will be benefited from the findings of the present study. Consequently, the outcome of this study might help UGC (University Grant Commission), Ministry of Education of Bangladesh as well as Dean of School of Business of BOU, faculties, learners and other concerns to design regarding the integration of ICT into teaching and learning of BBA program and issues affecting its uses.

1.2 Research Question and Objectives of the Study:

Research Question:

Are the teachers of BBA program ready and motivated for technology-enabled teaching learning (TEL) practices?

Research objectives:

The objectives of the study are as follows:

- to reveal the demographic status of the teachers of BBA program
- to find out the course teachers' attitude towards effective use of technology in higher education
- to audit their readiness for facilitating TEL
- to identify the use of technology by the course teachers in the BBA program during Pandemic

2.0 Review of Literature

Educational systems around the world are becoming increasingly pressured to apply the new ICT tools to their curriculum to provide students with the knowledge and skills that they need in the 21st century (Hue and Ab Jalil, 2013). The significant advantage of using ICT is it has varied tools to teach the students. The E-portfolios form the basic evident method in teaching through ICT. Web is the source for all the teaching learning pedagogy. Learning

records are closely related to the learning plan, an emerging tool that is being used to manage learning by individuals, teams, communities of interest and organizations Weldon, et. al. (2013). The integration of information and communication technologies into curriculum is a crucial process in ensuring the quality of education (Hue and Ab Jalil, 2013).

Teachers also get a satisfaction in promoting this kind of learning because students are more involved when the class is an integrated ICT class rather than traditional classroom. It is challenging for the teachers to educate through ICT method because of the complexities in framing the syllabus and they are to prepare the materials by their own. ICT teaching promotes the way to access, store, retrieve and manipulate information in various spheres, to combine all it for the effective learning process which helps in solving complex problems to develop cognitive skills. A considerable number of studies can be found that focus on school teachers‟ perspectives and classroom practice of using ICT in schools (Ertmer & Ottenbreit-Leftwich, 2010), particularly in the context of a developing country (Shohel & Power, 2010). Ertmer and Ottenbreit-Leftwich (2010) note that teachers‟ confidence in relation to ICT is more important than their ICT knowledge and skills. Therefore, prior experience of ICT, self-study, communicating with knowledgeable peers, and students‟ success of using ICT are factors that need to be considered to prepare both school teachers and teacher educators for teaching about and with ICT. However, many recent research studies on this theme shows that many institutions are failing to integrate technology into existing context. Bauer & Kenton (2005) stated in their study that although teachers were having sufficient skills, were innovative and easily overcome obstacles, they did not integrate technology consistently both as a teaching and learning tool. Gebremedhin and Fenta (2015) conducted a study to measure teachers' software usage as well as other instructional tools and materials, preferences for professional development on information gathering and support, factors that encourage teachers' usage of technology, teachers' perceptions of self-efficacy and barriers that teachers faced during technology utilization in teaching-learning process. And major findings include encouraging technology is important to apply ICT in teaching-learning process. Teachers have strong positive perception to use ICT in teaching-learning process. Also, there is significant relationship between teachers' perception towards ICT integration into Teaching-learning process and the factors that encourage ICT usage. This indicates that the teachers' perception towards ICT integration into teaching-learning process increases if ICT usage is encouraged and vice versa. However, majority of the teachers pointed out that one of the barriers to technology implementation is lack of teachers' technical knowledge and shortage of resources. Therefore, the college should critically focus to integrate ICT in each course to make courses interactive and easily understandable by their students. Sahin-Kizil (2011) also reviewed that use of ICT for educational purposes yield positive outcomes on the part of the students such as increased motivation, active learning, providing efficient resources and better access to information. Integrating ICT into teaching and learning is not a new concept. It may be as old as other technologies such as radios or televisions (Wang and Woo, 2007). Bingimlas (2009) findings show that teachers had a strong desire for the integration of ICT into education but they encountered many barriers. The major barriers were lack of confidence, lack of competence and lack of resources. Since lack of confidence, competence and accessibility have been found to be the critical components of technology integration in school. Moreover, Wang and Woo (2007) developed a systematic model for ICT integration. It is a systematic because it follows a logical flow and has components organized manner. Systematic model starts with a problem statement, which describes the major problems or issues to be addressed in a topic. Learning objectives specify the intended learning outcomes at the end of the topic. In order to address the problem and achieve the learning objectives, teacher-designers need to carefully compare all possible echnologies that can be used for learning this topic. The technologies in this model may include software such as multimedia courseware, web-based resources, communication tools (such as voice chat, textual discussion forums, or video conferencing), mind tools (such as concept mapping tools and multimedia authoring tools), or any other possible ICT tools. In the rationale for using the technology, technology should be used not because it is available or it has been shown effective in some cases. It should be used to enable the process and enhance learning. After determining what technology is needed and why, teacher-designers must now decide how to effectively and meaningfully incorporate the selected technology into the topic learning. Since a topic is usually composed of several lessons, details on ICT integration should be provided separately for each lesson as well as for the entire topic. At the end of the topic, the students will be assessed on how well they have mastered the topic.

At the level of teachers there are difficulties in the technological resources, the skills to work with them and of course the reconfiguration of the subject in order to teach in online format. With the implementation of remote education, teachers do not have enough guidance, training or resources, specifically they have no support to teach in the online environment, disseminated through computer or telephone applications (Vulpe and Pribac, 2021). Watermeyer et al. (2020) reported a survey from 1,148 academics working in universities in the United Kingdom. They suggested that online migration is engendering significant dysfunctionality and disturbance to their pedagogical roles and their

personal lives. In the research conducted by Wu S-Y (2021), the first objective was to explore teachers' online teaching activities when classroom teaching was suspended due to COVID-19. It was found in terms of teaching, lecturing with a presentation screen was the most frequently used, regardless of the learning stage.

3.0 Methodology of the Study:

Data has been collected from the teachers of BBA program of School of Business of BOU of different study centers located all over the country of Bangladesh. Total numbers of teachers of BBA program of School of Business of BOU are the population of this study. Convenience sampling method was used to choose sample respondents. BBA program has been operating at 15 study centers covering the whole country of Bangladesh. In this study total 10 study centers have been selected covering one study center from each seven Divisions of Bangladesh and from Dhaka division all three study centers. In this study, both primary and secondary data has been used. Primary data has been collected by using questionnaire and Focus Group Discussion (FGD). Secondary data were collected from different books, magazines, websites, and journals etc. Semi-structured questionnaire has been adapted from different literature review (especially Kirkwood and Price, 2016) and with the help of experts for interviewing the sampled respondents. Valuable feedbacks and suggestions also incorporated after conducting pilot survey in different study centers in finalizing the questionnaire. The questionnaire has been administered in the study among the 50 teachers in the BBA program of Bangladesh Open University (BOU). In addition, a focus group discussion with selected teachers and TEL experts was used at each study center in the study. For data analysis, descriptive statistics like mean and percentages have been used.

Limitations of this study

This study has some limitations. Firstly, this study was confined to the context of the BBA program of School of Business of Bangladesh Open University; no other program from the university was targeted. Also, the data was not collected from all the study center where BBA program of school of business are running.

4.0 Findings and Discussions:

In this study, descriptive statistics were used to analyze the basic data, the online teaching experience and the research question.

4.1 Demographics:

It has been found that most of the surveyed teachers of this study were male and their age ranges from 30 to 61 years. Result from Figure 3.1 shows that most of the teachers of BBA program of School of Business are senior in terms of designation and experience. Only few of them (7%) are Lecturer by designation which is the starting post of teaching profession.

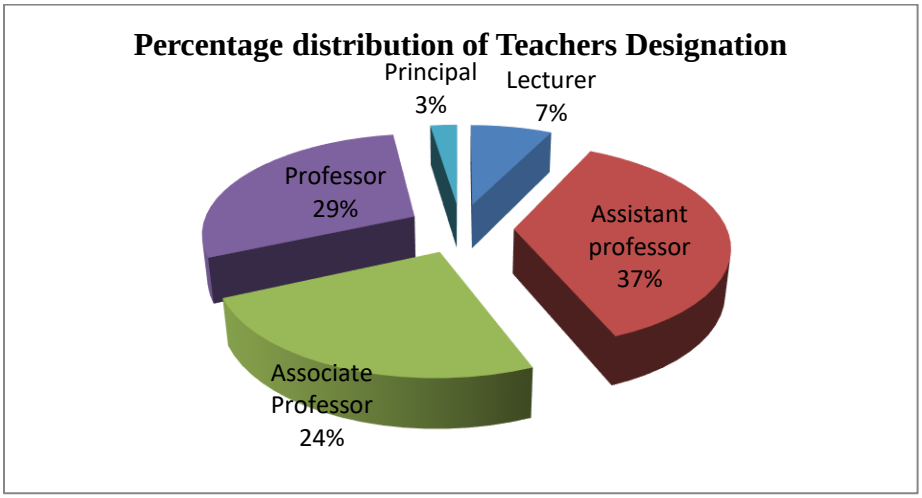

Figure – 4.1: Percentage distribution of Teachers' Designation
Source: Researches' survey

Figure 4.2 shows teachers' academic major area. Survey results show that all the teachers are from Business background except 5% of them are from Economics.

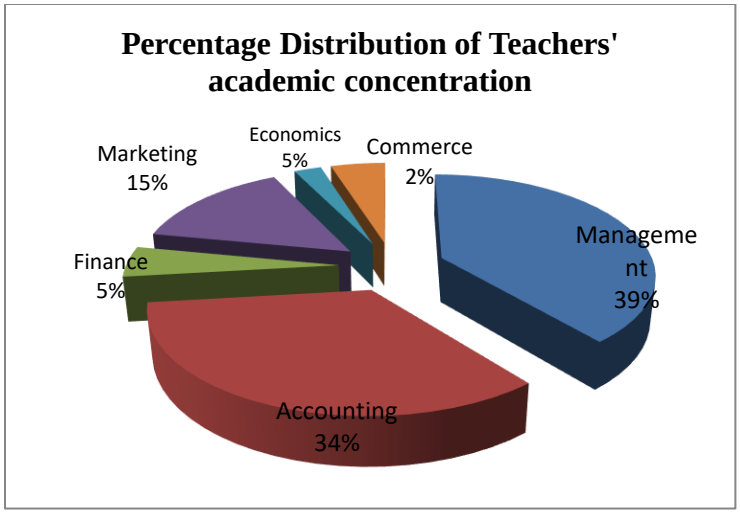

Figure – 4.2: Percentage Distribution of Teachers area of academic concentration.
Source: Researches' survey

It was seen in Figure 4.3 that a good portion of the surveyed teachers of BBA program are holding PhD degree in different discipline.

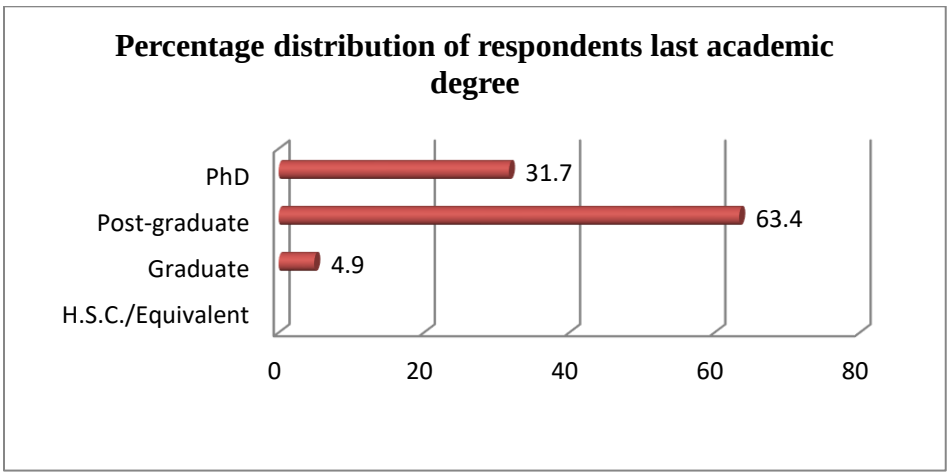

Figure – 4.3: Percentage Distribution of respondents' last academic degree
Source: Researches' survey

4 .2 Course teachers' attitude towards effective use of technology in HE
Teachers' response on the use of Technology for teaching has been presented in the Figure 4.4. There comes mixed response from respondents. Results showed that greater than a half of respondents (53.5%) think that use of ICT is supportive for teaching; some of them (41.6%) think that make use of ICT in teaching is not supportive.

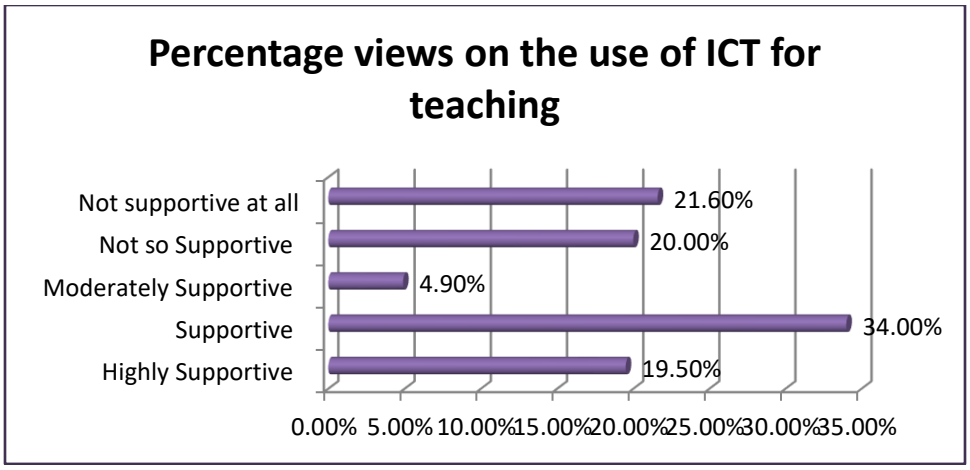

Figure 4.4: Teachers' perception regarding the uses of ICT tools supports teaching
(Source: Researchers' survey)

Figure - 4.5 indicates that the significant portion (80.5%) of the teachers' thinks ICT related courses should be integrated in the curriculum of BBA program of school of business. Few (20%) of them said that there is no need to include courses related to ICT in the curriculum of BBA program.

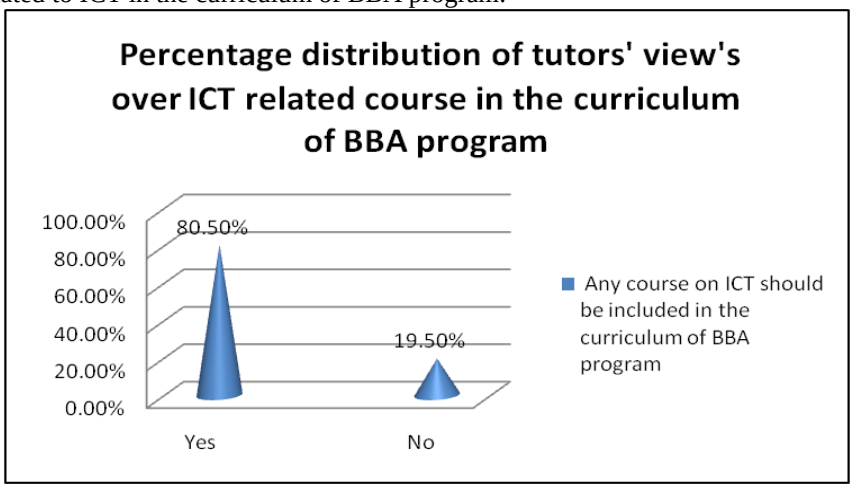

Figure 4.5: Teachers' perception regarding ICT related courses in the curriculum of BBA program ***(Source: Researchers' survey)***

Figure-4.6 present percentage distribution of teachers' views over Technology related training for effective teaching in the class. Result found that training in basic Microsoft PowerPoint, Microsoft Word, Microsoft Excel and Microsoft Access (58.5%) has been suggested by most of the teachers. Moreover, they actually desired on the effective advance use of Microsoft packages for content development. Besides, SPSS program (34.1), different types of Technology training (29.3), Freelancing (14.6), Relevant Internet Browsing (9.8) and pedagogy (4.9) also suggested by the respondents to make their teaching more effective for the learners of BBA program of BOU.

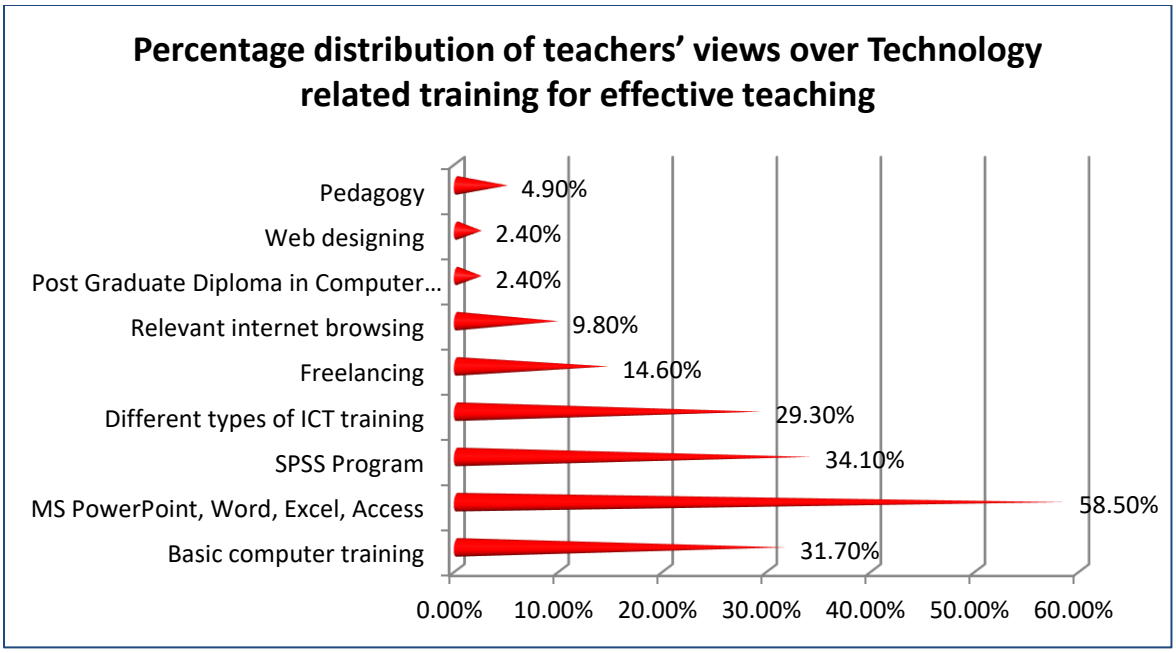

Figure 4.6: Percentage distribution of teachers' views over Technology related training for effective teaching ***(Source: Researchers' survey)***

4.3 Course teachers' readiness for facilitating TEL

Respondents were asked about their readiness for facilitating Technology Enabled Learning. Questions were about teachers' pedagogical knowledge for TEL, training on ICT, online communication skills, participation at any MOOC courses, previous online teaching experience and internet accessibility. Table -4.1 presents the responses. Result found that most of the teachers of BBA program has full time internet access. Further, close to half of respondents has experience of online teaching prior pandemic and received ICT training for teaching and learning. For TEL pedagogical knowledge and effective communication skill with students is very vital. The survey found that only 25% and 36% of the respondents has pedagogical knowledge for technology-based education and effective online communication skills. Moreover, 27% of the course teacher of BBA program attended massive open online courses (MOOCs).

Table 1: Teacher's perspective on their readiness for facilitating TEL		
Question	**Yes (%)**	**No (%)**
1. Do you have pedagogical knowledge for technology-based education?	25	75
2. Have you received training on the use of ICTs for teaching and learning?	42	58
3. Do you have effective communication skills for online teaching?	36	79
4. Have you attended any massive open online courses (MOOCs)?	27	73
5. Do you have any experience in online teaching prior to the pandemic?	31	69
6. Do you have full time access the Internet?	79	21

As seen in Figure – 4.7, significant percentage of the respondents (91.20%) opines that they have training on fundamentals of ICT. Furthermore, they also believe that for effective teaching training on ICT is very supportive.

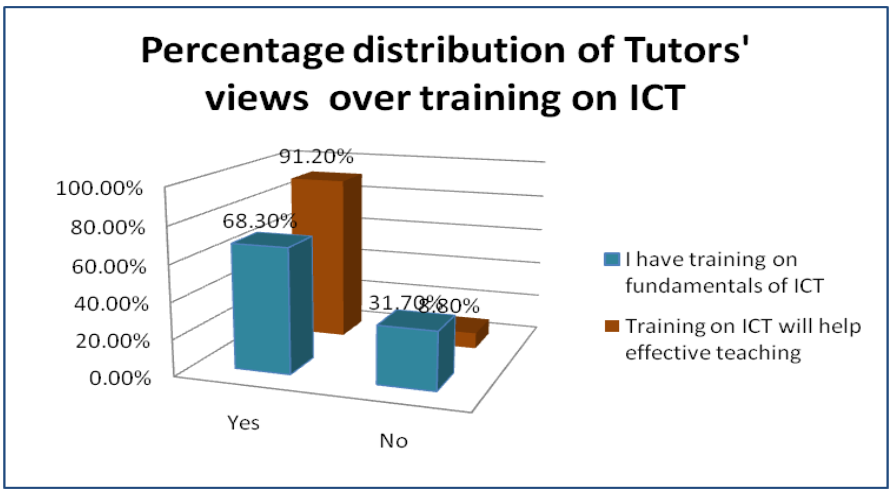

Figure 4.7: Percentage distribution of teachers' views over training on ICT ***(Source: Researchers' survey)***

4.4 Use of technology by the teachers in the BBA program during Pandemic:

Table 2: Teacher's perspective on the use of Technology during pandemic		
Question	**Yes (%)**	**No (%)**
Do you think teaching during pandemic was effective?	44	56
Do you think you have been prepared for online teaching?	32	68
Do you think online teaching could be improved during a pandemic?	69	31

School of Business of Bangladesh Open University had continued online classes during pandemic. Thus, teachers' perception on the technology uses in the BBA program during pandemic situation was also examined. It has been found that most of the teachers were not prepared for online teaching during pandemic. Therefore, more than half of the respondent thinks teaching during pandemic was not effective and there was scope to improve teaching during that time.

4.5 Findings from Focused Group Discussions (FGD)

A focused group discussion was held lately involving course teachers from each study center. The participants gave their observations on ways the overall service quality of the school could be improved. The following suggestions were made by the participants:

Most of teachers uses zoom platform, google classroom and Learning Management System (LMS) of Bangladesh Open University for online class during pandemic. The university should arrange training for Teachers on new technologies for class. But a firstly a strategy or policy for Technology-Enabled Learning need to develop and ensure proper plan to develop course contents for delivering through online. Uninterrupted Internet connection must be facilitated for both teachers end and students end. Initiative for pedagogical application for online learning should also be taken by Bangladesh Open University,

5.0 Discussions

Teachers' response on the use of ICT for teaching is mixed. Some of them think that use of ICT is supportive for teaching and others think use of ICT in teaching is not supportive. Respondents are moderately competent at the knowledge and use of Technologies in education. Further, they have positive attitude towards effective use of technology in higher education.

Majority of the teachers of BBA program has full time internet access and has little experience of online teaching prior pandemic and received ICT training for teaching and learning. For TEL pedagogical knowledge and effective communication skill with students is very vital. The survey found that almost half of the respondents have pedagogical knowledge for technology-based education and effective online communication skills. It has been found that most of

the teachers were not prepared for online teaching during pandemic. Therefore, more than half of the respondent thinks teaching during pandemic was not effective and there was scope to improve teaching during that time.

6.0 Conclusion and Recommendations:

6.1 Conclusion

School of Business of Bangladesh Open University had continued online classes during covid-19 pandemic situation. It was found that teachers had positive perception regarding technology-enabled learning during the stress time. Thus, it can be concluded that teachers of BBA program are not completely ready but fully motivated for technology-enabled teaching learning (TEL) practices.

6.2 Recommendations

Following recommendations are widely mentionable from the study:

- The School of Business of BOU should ensure proper plan to develop course contents for delivering through various ICT the BBA program.
- Again, the School should take necessary steps to take due consideration to incorporate ICT into the curriculum of BBA program of School of Business.
- The BOU authority should take initiatives for the teachers to participate in different seminars and training programs for skill development.
- Must develop a strategy or policy for Technology-Enabled Learning.
- The BBA coordinator of the School of Business in consultation with the Dean, Faculties and the BOU authority arrange for workshop or coordination meeting for all the teachers, teachers, officials from Regional Centers and learners of each study center where BBA programs are offered within six months prompt feedback to learners and teachers, relevant updates regarding program etc.

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