

EDUCATIONAL TECHNOLOGY (EDTECH) IN ENGLISH AS A FOREIGN LANGUAGE (EFL) IN BANGLADESH: NECESSITIES, INNOVATIONS, AND IMPLICATIONS

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Abstract: The use of educational technology (EdTech) in English as a Foreign Language (EFL) learning in Bangladesh has already been accepted due to its amenities. This paper aims to explore the EdTech tools and devices currently used in EFL context in Bangladesh. Concurrently, it unearths the pragmatism of the EdTech resources along with what consequences they come with. The study applied a mixed-method approach consisting of both qualitative and quantitative research methods. 100 undergraduate students from 19 different private and public universities and colleges of Bangladesh were the sample population, and they were interviewed over the phone and provided with a semi-structured survey questionnaire using a Google Form sent via email and social networking sites. The findings reveal that almost all the participants have an idea of what EdTech includes, but they do not get the required support and environment to utilize them properly. Institutions offering EdTech support are quite a few in number whereas many have access to the latest EdTech inventions and innovations at their personal initiatives. Nevertheless, the learners encounter a number of crucial obstacles while exploiting EdTech scopes and arrangements, which are essential to address. Finally, the findings assert that learners are interested in utilizing EdTech in EFL learning with proper logistical support.

Keywords: Educational Technology, EdTech, EdTech support, Institutions, EFL, Bangladesh

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Introduction

English is globally recognized as one of the most widely spoken languages in the world (Suna & Durmuşçelebi, 2013). Rao (2019) and Seidlhofer (2001) claim that it is also commonly used as a second language or a lingua franca in global communication, education, business, travel, etc. According to Rao (2019), “English has an official or special status in almost 70 countries.” As a result, learning EFL has become increasingly important in today’s globalized world, and there is a significant demand for the English language around the world (Vonkova et al., 2021). English is the most commonly used of the approximately 5,000 living languages (Broughton et al., 2003). Moreover, it is the second language that is learned the most frequently. Demont-Heinrich (2008) gives estimated data in which it is said that 400 million individuals use English as a native language and a further 2 billion people use it as a second or foreign language.

Many educators believe that using computer technology to deliver high-quality education is essential (Ahmadi, 2018). Bull and Ma (2001) state that technology offers language learners an endless number of resources. In addition, multimedia technology provides a sense of realism and works excellently, which considerably boosts students’ interest and motivation for studying and their engagement in class activities (Prayudi et al., 2021). Mahrooqi and Troudi (2014) think that the use of computer technologies in language training creates a learning environment that is focused on the student. It gives teachers and course administrators the ability to present lessons in a variety of ways to engage students with different interests. It offers opportunities to learn outside the classroom and is seen as better accommodating individual variations. Gençler (2015) asserts that online sources stimulate students to learn more, and computer-based activities offer students quick access to relevant information. Over 90% students are more engaged and passionate when utilizing modern technology to learn English (Mofareh, 2019).

Another important aspect is that the use of educational technology (EdTech) has increased significantly worldwide in recent years to ensure efficient teaching and learning (Alam, 2016). To keep up with global trends and demands, Bangladesh, a developing nation, is also striving to integrate modern technologies like information and communication technologies (ICT) into the country’s key industries (Rahman et al., 2012). Based on the data analysis of Fatema and Sultana (2020), although Bangladesh is using more technology on a daily basis, the amount is still quite low and the classroom technologies are insufficient. Besides, they assert that EFL learning using technology has become highly necessary in Bangladesh because of the rapid development of technology and the requirement for English proficiency for higher education and jobs. Rao (2019) states that “most job providers ask for language skills, especially communication

skills in English.” Furthermore, he believes that English is necessary for those who want to work abroad or for a multinational company.

However, despite its possible benefits, the effective use of EdTech in EFL classrooms remains a challenge due to various factors, such as a lack of solid infrastructure and computer and e-learning expertise (Pirani, 2003). It also includes insufficient teacher training, rapid Internet connections, secured structures, and limited access to technology (Pirani, 2003; Baylor & Ritchie, 2002). The goal of this research is to examine the current situation of EFL education in Bangladesh, the innovations used, and the effects of such innovations. It will then explore the various forms of EdTech used in EFL learning, such as digital textbooks, language learning apps, video tutorials, online learning platforms, mobile apps, language learning management systems (LLMS), artificial intelligence (AI), and online resources. The paper will also discuss the advantages and disadvantages of these technologies and how they impact EFL teaching and learning in Bangladesh. The research will also examine the effectiveness of these innovations and their ability to improve EFL learning outcomes in Bangladesh, including how they affect teachers’ roles and responsibilities, and how classroom dynamics change. The overall goal of this research paper is to provide information about the situation of EFL learning in Bangladesh nowadays, as well as the innovations used and their effects. The findings of this study can contribute to the development of more effective EFL teaching practices and policies in Bangladesh and other similar contexts.

Literature review

English has become the common medium of communication in the modern world. As a result, the world has become smaller, easier to access, shareable, and comfortable for everyone (Rao, 2019). He also asserts that English is used as a common language to maintain relationships between two nations and to expand science, education, business, trade, and commerce internationally. Supporting Rao (2019), Broughton et al. (2003) say that along with serving as a key forum for discussion at the UN and its associated organizations, OPEC, EFTA, ASEAN, BRICS, INTERPOL, and the NATO command language, it also serves as the official language of international aviation as well as the unofficial first language of international sport. Widdowson (1997), Modiano (1999), and Jenkins (2000) used the phrase “English as an International Language” for the very first time. In non-English-speaking nations, learning English is essential because it is the only tool through which communication is possible in the modern developed world (Begum, 2011).

Likewise, Bangladesh is among the countries with a high number of English learners in the world, which makes sense to Bangladeshi students considering that English is the most important language in the world (Rahman & Pandian,

2018). This is why the nation is currently placing a high priority on maintaining the growth of English teaching and learning (Rahman et al., 2019). To achieve this objective, several changes have been brought to the English curriculum by the National Education Policy in 2010, emphasizing English as a language of communication so that students can be more skilled and able to use it for multiple purposes, such as acquiring knowledge, higher education, and getting access to national and international jobs (National Curriculum, 2012, p. 2). As a part of Digital Bangladesh: Vision 2021, Bangladesh is putting effort into reducing conventional teaching techniques and joining the online community where education is provided with maximum accessibility (Hossain, Salam & Shilpi, 2016). Mallick et al. (2020) find that both teachers and students in Bangladesh think that the use of technology is not a luxury but rather an essential tool to enhance the teaching-learning environment at the secondary level of education, because the needs of Bangladesh in education are also changing along with those of the developed world. Likewise, Ahmadi (2018) also states that using technology has grown to be an essential part of learning both inside and outside of the classroom, and language learning has benefited from the integration of technology, which also enables teachers to adjust classroom activities to boost language acquisition.

On the other hand, Begum (2011) thinks that in developing nations like Bangladesh, creating innovative technological infrastructure for efficient English as a Foreign Language (EFL) learning is a crucial challenge. Yet, the Government of Bangladesh is trying to ensure the best quality in education through modern technology, on its own initiative, and with the help of NGOs and international organizations. In 2009, the Ministry of Education of Bangladesh launched an educational program for learning English using a mobile phone titled “BBC Janala” in collaboration with BBC World Service Trust to provide three-minute mobile English courses to large numbers of adult learners in order to help them change their lives and the nation’s economic growth (Begum, 2011; Ahmed & Kabir, 2018). According to Shohel et al. (2010), it has been proven that the use of new mobile technologies enhances the standard of teacher education and training and makes learning more accessible.

The use of mobile phones has increased in Bangladesh to a great extent. Begum (2011) states that due to the low call rates and SMS service, even a day laborer can afford a mobile phone. She also states that students from both urban and rural areas use mobile phones frequently, and so they can be comprehensively applied as an English language teaching and learning tool in Bangladesh, a view also supported by Walsh et al. (2013). Furthermore, based on their experience in a Bangladeshi educational institution, Alam and Islam (2008) state that SMS technology is one of the most promising ways to set up an interactive online teaching environment for remote learning. Banks (2011) explores the fact that more than 12,500 teachers and over one million students from primary and

secondary schools in Bangladesh have been given training in English teaching through mobile phones as a part of the BBC Janala project. However, Stockwell (2007) shows that students have the experience of using their personal computers or mobile devices to learn vocabulary, and they enjoy and perform better on computers than on mobile devices to learn vocabulary.

Becker (2000) states that computers are considered an essential tool for teaching languages where teachers can choose their own methods and curriculum, and a lot of teachers think that they are a medium for providing high-quality education to students. Moreover, Eaton (2010) says that communication with computer technology is an effective feature of language learning and that more equitable participation is possible with computer-based discussion than with physical discussion. Zhao (2013) also supports the statement. Likewise, computer technology makes teachers and learners improve and cooperate in language learning (Bennett et al., 2000). In contrast with developed countries a decade ago, Bangladesh was not able to use technologies like e-learning and m-learning because of a lack of skilled teachers, electricity, and computers in the education sector (Begum, 2011). Although Bangladesh has traditionally utilized the conventional ELT strategy, it is not adequate in this modern technological era (Mallick et al., 2020).

However, in order to keep pace with the developed world, the scenario has changed with the demands of the Bangladeshi people. Haque and Akter (2014) assert that the need for technology-mediated education is increasing daily in Bangladesh since it helps to grab students' attention by displaying instructive videos or animations. To keep up with the demands, the 2010 National Education Policy of the country recommended using audiovisual resources in language classrooms. In line with the National Curriculum, Save the Children plays an active role in developing software for teaching English in the classroom to complement government policy and has been placed in 18 government primary schools in a district of Bangladesh (Parvin & Salam, 2015). To achieve the vision of a "Digital Bangladesh," the government of Bangladesh reinforces the use of technology in all aspects of daily life, and later in 2014, the government of Bangladesh began supplying laptops and multimedia projectors to every government high school to ensure quality education (Fatema & Sultana, 2020). In addition to this, adding multimedia to university education has already been remarkable, and it is also thought that this technology will enhance the conventional pedagogy at the secondary and higher secondary levels in Bangladesh (Mallick et al., 2020).

Thao (2003) believes that in the current era of technological development, it is impossible to disregard the value of multimedia materials for the teaching of the English language. Moreover, teaching English as a second language has greatly benefited from the use of multimedia technologies, particularly for non-

native English speakers (Chapelle, 2001). Using multimedia instruction with an audio-visual system in the classroom has more benefits, such as giving learners stimuli to help them understand a certain subject topic better (Canning-Wilson, 2000). It also encourages students to wonder, evaluate, and feel interested (Koksal, 2004) and helps both students and teachers learn and apply English grammar in practical contexts (Koehler, 2009). Furthermore, it helps lecturers achieve the goals of efficient foreign language instruction, particularly English in the modern era (Saglam & Sert, 2012), enabling students to absorb the subject with excitement. Additionally, it boosts their thinking skills and increases their knowledge by playing films in the classroom (Arifah, 2014) and assists learners in understanding the immediate meaning of the language by showing cartoons in the classroom (Islam, 2020).

Mallick et al. (2020) conducted a survey in which the majority of survey participants acknowledged that multimedia technology not only boosted students' creativity but also helped teachers use innovative methods of instruction (see also Huang & Liu, 2000). Huang and Liu (2000) also found that most of the students do think they can learn more effectively when multimedia technology is integrated with traditional methods rather than just talking and writing on the board. Also, their analysis points out that younger teachers showed greater interest than older teachers in using multimedia technology to teach English in the classroom. Many educational institutions in Bangladesh are gradually integrating multimedia because of its advantages. Likewise, Mahmuda (2016) asserts that multimedia projectors are frequently used in Bangladeshi English-language classrooms. It shows that the significance of including technology in English teaching and learning has been acknowledged. Fatema and Sultana (2020) surveyed both English and Bangla versions of colleges, and they found that about 40 out of 100 institutions are conducting language classes using multimedia regularly. Not only that, but the government of Bangladesh and the Ministry of Education are also putting much effort into conducting classes using multimedia projectors, which is essential for ensuring a communicative language teaching (CLT) approach in English language classes.

According to Afrin (2014), who conducted a study in three private universities in Bangladesh, "the lesson is more interesting if a teacher uses electronic tools," and this is highly acknowledged by 72% of students; "they prefer learning from a teacher who uses various e-tools while teaching," which is also strongly acknowledged by 78% of students. Eleven of the twelve teachers involved in the study use computers in the classroom mainly to conduct multimedia classes. The findings actually indicate that the use of the latest digital devices is now in high demand among modern learners. Young and Bush (2004) think that it is essential to use technology widely in the classroom to teach English because it improves instruction quality by encouraging student participation. On the contrary, too much reliance on multimedia-based learning can also

increase the distance between teachers and learners, damaging teacher-student relationships and society as a whole (Chen & Liu, 2012). In addition, UNESCO (2012) reported that students sometimes prefer to deal with traditional lessons over digital ones, so by combining information and communication technology (ICT) with traditional education, the teachers need to pay special attention to the students' reactions to the use of ICT in the classroom.

Bangladesh has been considerably digitized, and many researchers highlight the importance of incorporating technological teaching methods into its educational programs, particularly for higher education (Mahmuda, 2016). ICT can be an effective tool for learning English as an EFL student in Bangladesh. With the help of the internet, students can access a wide range of online resources, including interactive language learning websites, audio and video materials, online dictionaries, and language learning apps. These resources can provide students with additional opportunities to practice their language skills and to learn at their own pace. Multiple research investigations have found that ICT is vital for teaching EFL, and introducing new ICT tools into educational services, such as laptops, interactive whiteboards, LCD projectors, the internet, and social networks, promises to help students utilize English in a very stress-free, real-life, and communicative atmosphere (Çakici, 2016). Furthermore, ICTs have several advantages, such as the fact that students can play an enthusiastic role, have a discussion involving adequate information, process new educational materials assigned to them, and improve their language learning abilities (Costley, 2014).

Different types of modern technological tools and apps are being used to make teaching and learning accessible throughout the world. Modern English language learners can use smartphone apps as a reliable foundation (Zilber, 2012). There are so many modern EFL video learning and gaming apps through which one can acquire the English language and improve their visual, auditory, reading, writing, and kinesthetic skills by watching videos and playing games. Altun (2015) says that in order to increase students' motivation and linguistic awareness, teachers use technology such as computers, the internet, smart boards, mobile phones, video games, and music players during the target language learning process. Likewise, Acapela, E-book, Google Classroom, Zoom Cloud (Prayudi et al., 2021), WhatsApp (Alsalem, 2014), Wiki technology (Lin & Yang, 2011), and several social networking websites such as Facebook, Twitter, Skype, YouTube, and LinkedIn (Fatema & Sultana, 2020; Prayudi et al., 2021), as well as podcasting (Prayudi et al., 2021) are the most prominent easy and free platforms that can be used for teaching and learning activities by both teachers and students. Fatema and Sultana (2020) claim that although these online platforms are mostly used for entertainment, they are also used for learning purposes, and these online platforms support students in keeping in touch with the teachers even outside of class. Hossain (2018) also says that in Bangladesh,

EFL students at the university level are making the best possible use of these technological facilities both inside and outside of the classroom.

In Bangladesh, educational technology is increasingly being used in various ways to enhance the quality of education and make it more accessible to students. Islam (2014) states that due to the government's reform of regulations and policies, ICTs have spread quickly in Bangladesh. E-learning platforms, digital textbooks, educational apps, online assessments, and virtual labs are being used to make education easier. Hossain (2018) finds that in Bangladesh, students who want to learn English have plenty of access to smartphones and other cutting-edge technology, as well as software (apps); in learning English, 76.47% of EFL learners use smartphones for using English language learning apps. Moreover, he says that it is fun, cost, and time efficient to study the English language with the support of smartphones and applications, and practicing and learning may occur in a variety of settings like standing, sitting, and lying down. In relation to this, Cano (2014) says smartphones and other portable digital gadgets have tremendous teaching capacity. Due to the low price of smartphones in Bangladesh, one can buy an Android smartphone for under USD 27.04 (PhoneListBD.com). Hence, almost every student can purchase it. This is why the use of these technologies has become the standard teaching method for EFL students nowadays. Amidst the Corona pandemic, the use of these technologies in education has increased around the world.

Hossain (2021) argues that during the pandemic, with a great deal of excitement and disagreement, English language instructors from a variety of Bangladeshi institutions, including secondary, higher secondary, and university institutions, gradually offered online sessions. In his study, teachers think that there is no need to have a large place or infrastructure for online teaching, and it is possible to conduct and upload a video class from anywhere, and it is also time-saving. On the other hand, students think that they can attend online classes in their own free time, and it is also safe from various forms of transport problems, pollution, safety, and social isolation. Likewise, Raheem and Khan (2020) think that because of the lockdown during the Covid-19 pandemic across the globe, including Bangladesh, e-learning can be considered a secure, efficient, individualized, and accessible instrument in order to improve students' English language proficiency. But, in order to attain these technological amenities in education, there are lots of challenges and barriers for a developing nation like Bangladesh.

Although ICT has the ability to significantly enhance the educational system, developing nations are still far from obtaining these advantages since they face numerous challenges (Khan, 2014). Many people in Bangladesh do not have access to the necessary technological infrastructure, such as computers and the Internet, to learn and use technology effectively. There is a lack of digital literacy

and awareness in Bangladesh, which means that many people do not understand how to use technology effectively or safely. As a result, this limits their ability to engage with and learn from technological advancements. Hossain (2021) examines Covid-19 and finds that in online education in Bangladesh, teachers face a lack of sufficient logistical aid from the institution, internet supply, and technological devices, and students face an inability to afford internet connections and show disinterest. Lack of training of teachers for technological use are also among the problems. Afrin (2020) shares the same opinion, arguing that most of the universities in Bangladesh do not have online learning environments or continuous internet connections with adequate speed, and students, especially from public universities, are not able to afford the technologies and internet facilities. She also sees technophobia in both teachers and students.

Parvin and Salam (2015) indicate that the majority of schools need the necessary infrastructure to utilize the CLT methodology successfully. In order to implement that, Bangladesh's 2010 National Education Policy strongly encourages teachers to make use of audiovisual tools for English classroom teaching. In addition, there needs to be more digital literacy and awareness in Bangladesh, which means that people need to understand how to use technology effectively and safely. This can be a barrier to technological learning, as people may be hesitant to engage with new technology without proper guidance. In fact, for teaching language skills, it is essential that teachers are well acquainted with these technological devices (Gilakjani & Sabouri, 2014). Simultaneously, researchers indicate that in Bangladesh, EFL teachers need proper training on multimedia and other EdTechs so that they can improve their technical skills to operate the EFL classes effectively through technological devices (Afrin, 2014; Parvin & Salam, 2015; Mallick et al., 2020). Accordingly, Parvin and Salam (2015) conducted a study and noticed that teachers who perform well during teacher training also do better in classroom facilitation.

Therefore, an effective e-content-based lesson depends on the teacher. However, it is also seen that teachers often utilize the material as a tool without adequate preparation. Khan (2014) asserts that "most of the teacher training programs in Bangladesh were criticized as poorly constructed because they failed to focus on teachers' actual needs, such as the teachers' inability to integrate ICT into their real teaching-learning situation." In addition, the use of ICT in the classroom can have certain drawbacks, such as teachers' challenges in relating and applying the technologies to the course syllabus and curriculum (Çakici, 2016). Even though we are in the "age of technology," many teachers are still hesitant to use technology with students on a regular basis. Hence, in EFL learning, there is a gap between the technologies and their effective use in Bangladesh. Additionally, the review of literature on the topic reveals that the use of technology is vital for acquiring language, and at the same time, it implies that using digital resources cannot ensure both teachers' teaching and students' learning (Ahmadi, 2018).

This study will reveal the actual scenario for both students and teachers, how much they utilize EdTech to acquire its advantages, and to what extent they face barriers or challenges in terms of using it in their real lives.

Research Objectives

The study intends to accomplish the following aims:

- To assess the actual state of using EdTech in EFL learning, and their suitability in Bangladesh.
- To determine the benefits and drawbacks of using EdTech in EFL learning in Bangladesh.
- To explain to what extent the EFL teachers and learners are acquainted with modern educational technologies and their features, and how much they are able to achieve their possible benefits in terms of Bangladeshi perspective.

Research Questions

To understand the context of EdTech in English as a Foreign Language (EFL) learning in Bangladesh, the study aims to find answers to the questions below:

- What is the current actual state of EdTech use (To what extent EdTech is being used, how they are used, and if their use is appropriate) in EFL learning in Bangladesh?
- What are the benefits and drawbacks of the use of EdTech in EFL learning in Bangladesh?
- To what extent are the Bangladeshi EFL teachers and students acquainted with modern EdTech?
- How much are Bangladeshi EFL teachers and students able to achieve the possible benefits of EdTech?

Methodology

Both subjective and objective perceptions were needed for this study to attain the best outcomes for its objectives. This study applied mixed methods with a combination of both qualitative and quantitative approaches in order to provide a more comprehensive understanding of the research questions, and both primary and secondary data were utilized for the study. According to Enosh et al. (2014), using mixed methods, researchers can provide comprehensive and in-depth answers to their research questions. The qualitative approach is capable of evaluating psychological points of view, and quantitative information may provide a clear indication and percentage of the facts the researchers will be focusing on. Aorny et al. (2022) point out that “the key features of the quantitative

method are a reliable outcome, measurable variants, a systematic survey, and precision. It is quite easy to predict the hypothesis of the study using this method. It provides the graphical pictures and calculative equation” (p. 415). Likewise, a researcher can generalize the results to a larger population by collecting data from a large number of individuals using the quantitative approach, and the qualitative approach, which values the opinions of its participants, offers greater knowledge of the problem under investigation (Dawadi et al., 2021).

For this purpose, the researchers conducted surveys and a small number of interviews to collect samples from students at different public and private universities and several colleges in Bangladesh. The researchers set eight open-ended and eight closed-ended questions for respondents, for a total of 16 questions. Open-ended questions help respondents give their own opinion broadly based on their personal experiences. Allen (2017) cited in Hossain (2021), clarifies that “Open-ended questions do not let the participants choose from a prearranged bunch of answer options; rather, they allow them to present replies in their own language” (p. 48). On the other hand, closed-ended questions draw a line to keep the respondents in a specific genre. It restricts the respondents to the limited number of options that are provided (Foddy, 1993).

Research Setting

In Bangladesh, higher education institutions play a crucial role in shaping the future of the nation’s youth. So, the researchers decided to conduct a survey among undergraduate students from English and other departments at 19 different public and private universities and several colleges in Bangladesh. As the research is based on different institutions and places, it will give a possible picture of the current use and condition of EdTech in the country.

The study seeks to provide valuable insights by collecting data from the University of Dhaka, Jahangirnagar University, Jagannath University, Daffodil International University, Gov.t Sarada Sundari Mohila College, University of Rajshahi, Pundra University of Science & Technology, Govt. Azizul Haque College, Rajshahi College, Begum Rokeya University, Hajee Mohammad Danesh Science & Technology University, Gov.t Alimuddin College, Khulna University, Islamic University, Bangladesh, Jashore University of Science & Technology, Noakhali Science & Technology University, University of Chittagong, Sylhet Agriculture University, and Shahjalal Science & Technology University.

Population Sampling

The sample population of this study has been chosen by using stratified sampling to select 100 undergraduate students from English and other departments who are continuing their studies at 19 different private and public universities and colleges in Bangladesh. These selected population samples and the selection approach help the study find the actual insights of educational institutions, especially private and public universities, and colleges, in the country. Parsons (2017) stated that “stratification is used to increase the efficiency of a sample design with respect to cost and estimator precision” (p. 1).

Data Collection

The survey was conducted through a semi-structured questionnaire for students in formal and informal ways. Since this study was conducted in different institutions, which are situated in different parts of the country, and no funds were given for the study to be conducted, it was not possible to reach every institution physically at the researchers’ own expense. So, from May 27, 2023 to June 8, 2023, the researchers distributed the survey questionnaires using both hard copies (5) and Google Forms as a soft copy (90), and very few of the respondents were interviewed (5) for collecting the qualitative and quantitative data. The data were collected in the same time span. Most of the questionnaires were provided through WhatsApp, Facebook Messenger, Instagram Messenger, and Email. Sometimes, the researchers needed to talk over the phone to make the participants understand and agree to participate in the study. Besides, they needed to remind the participants on social media sites to complete their participation by filling out the Google Forms. And several students had been interviewed over the phone to get to know them and their institution’s level of EdTech use. Some targeted participants did not take part in the survey, even though they agreed to participate at their own convenience. Then the researchers had to get in touch with more students to reach the targeted number of students. Most of the students were chosen from the English department and fewer from various other departments to illustrate the research’s objectives.

The following chart shows the distribution of 100 participants from different institutions in Bangladesh:

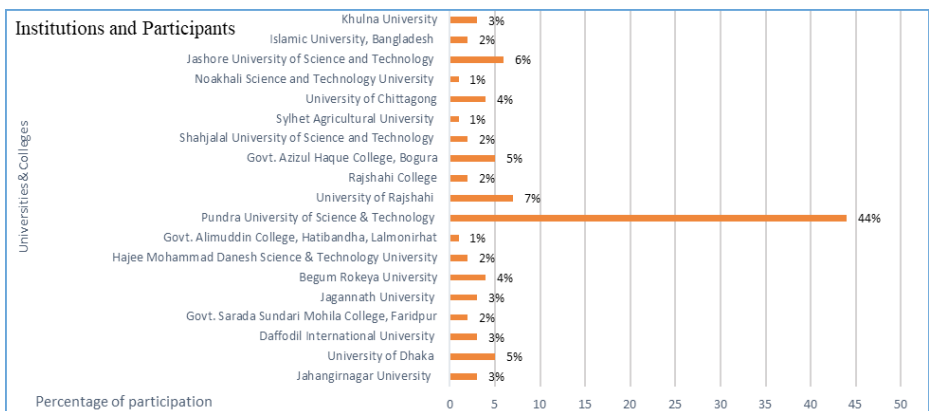


Chart 1. Number of participants and names of home institutions

Data Analysis & Findings

The collected responses and interviews are analyzed using a mixed method with a combination of qualitative and quantitative data analysis methods to get more reliable and accurate results. Furthermore, the collected responses from the close-ended questions are analyzed using the quantitative data analysis method, and then the findings are converted into numerical values and percentages represented by means of pie charts, infographics, tables, etc., using Microsoft Excel, Live Gap Charts, and other tools. Answers to the open-ended questions are analyzed using the qualitative data analysis method.



Figure 1. Familiarity of students with educational technology

The pie chart shows that most (95%) of the students who participated in this survey are familiar with educational technology. They know what EdTechs are. Only 5% of the participants do not have any idea of what EdTechs are.

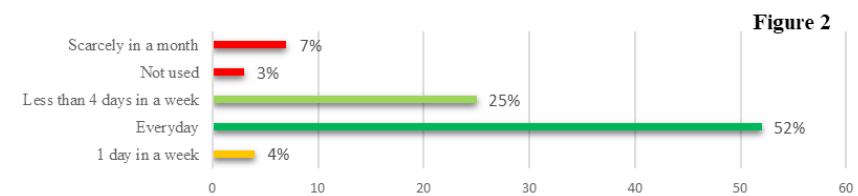


Figure 2. The frequency of using educational technology for learning English as foreign language

In figure 2, 52% of the participants say that their institutions use EdTechs almost every day for learning English as a foreign language. 25% of institutions use the EdTechs less than 4 days out of 7 days, 4% use it only one day a week, and 7% hardly use it once a month. Moreover, there is no use of EdTech in 3% of the institutions of the participants.

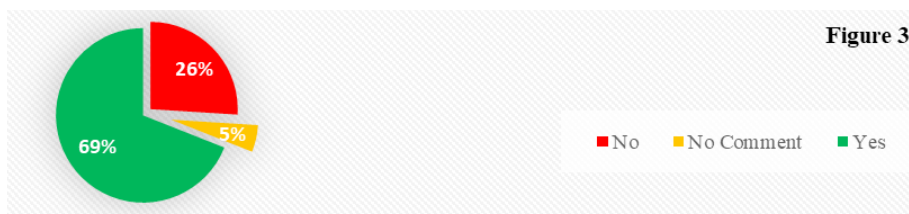


Figure 3. Having adequate infrastructure for utilizing EdTech in institutions

Figure 3 shows that, 69% of participants agree with the statement that they have adequate infrastructure for utilizing EdTech in a proper way. In addition, 26% of participants do not have adequate infrastructure, and 5% of participants have not shared their opinions in this case.

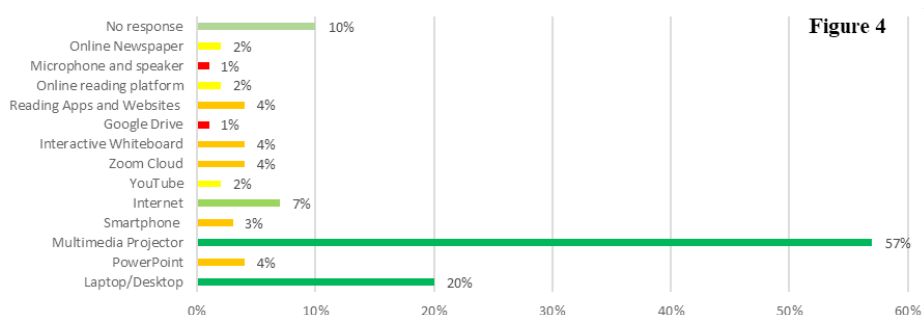


Figure 4. Various educational technologies used by institutions for teaching reading in English

Most of the instructors use a multimedia projector to teach reading in Bangladesh. The survey finds that 57% of institutions utilize multimedia projectors, along with 20% laptops or desktops and 4% PowerPoint. There is also 7% use of the internet, 3% use of smartphones, 2% use of YouTube, and separately, 4% use of

both Zoom Cloud and interactive whiteboard. Furthermore, there are different types of reading apps and websites (4%) that are used for teaching reading. Also, online reading platforms (2%), microphones and speakers (1%), and online newspapers (2%) are merely used in teaching reading. 10% of participants in the survey preferred not to share their opinions on this matter.

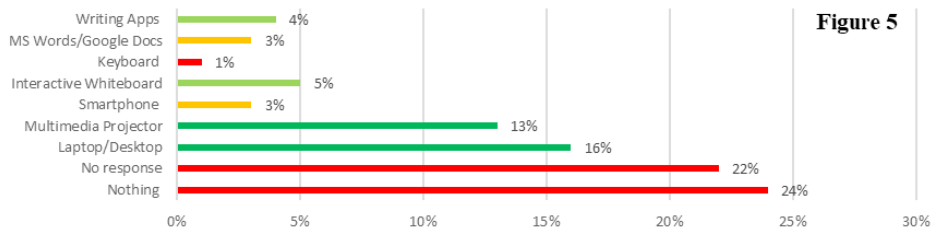


Figure 5. Various educational technologies used by institutions for teaching writing in English

According to 16% of participants, laptops or desktops are used to teach writing in their institutions. More than 10% of students who have participated in this survey said that multimedia projectors are used in their institutions. Moreover, they said that smartphones (3%), keyboards (1%), MS Word/Google Docs (3%), and different sorts of writing apps (4%) are also used by their institutions for teaching writing in English. But most of the participants (24%) say that their institutions use no technological devices for teaching writing in English. In addition, a large number (22%) of participants did not respond to the question.

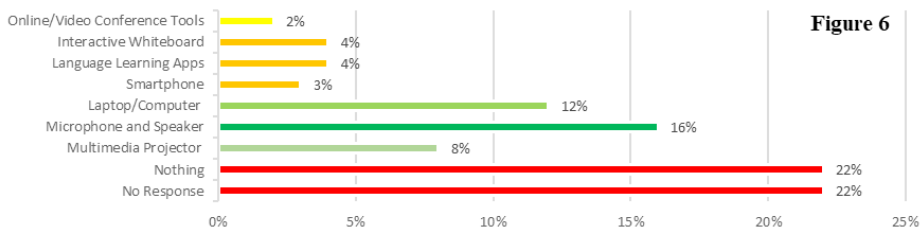


Figure 6. Various educational technologies used by institutions for teaching speaking in English

Figure 6 shows that 16% of participants use a microphone and speaker; 8% use a multimedia projector; 12% use a laptop or computer; 3% use smartphones; 4% use an interactive whiteboard; 4% use different types of learning apps; and only 2% use online or video conference tools to teach speaking in English in their institutions, while 22% do not use any kind of educational device. Interestingly, around 22% of participants showed no interest in answering the question.

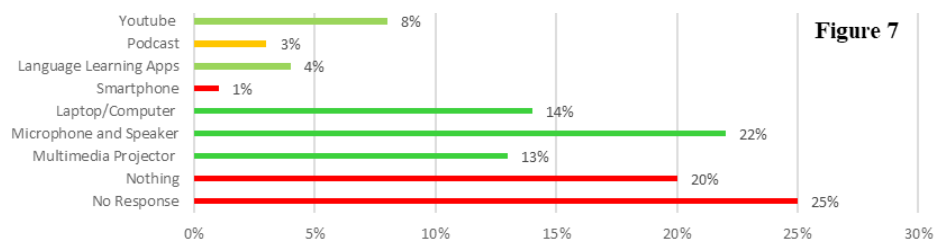


Figure 7. Various educational technologies used by institutions for teaching listening in English

About 22% of participants have a microphone and speaker in their institutions for teaching the listening part in English, while 13% have multimedia protectors. Besides, 14% laptops or computers, 8% YouTube, 4% different kinds of language learning apps, 3% podcasts, and only 1% smartphones are used for teaching listening in English in participants’ institutions. Additionally, according to 20% of participants in the survey, there are no such technological devices in their institutions that are used for teaching listening in English. And one-fourth (25%) of all participants abstained from sharing their opinions on this matter.

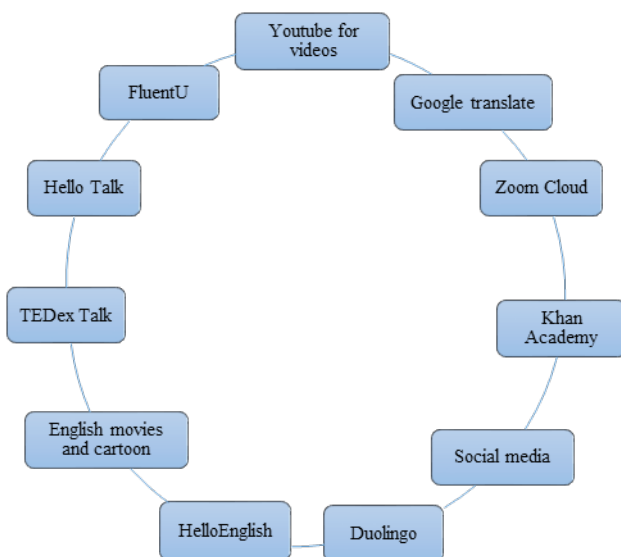


Figure 8. Students’ personal use of EdTech

In addition to using educational technologies aided or provided by institutions, students personally use different types of platforms and apps to learn English as a foreign language. The participants shared several platforms and app names that they use for their own purposes. They use the video sharing platform “YouTube” for watching the tutorials on their assigned English topics. On YouTube, they regularly watch the channel named “TED Talk” to learn English pronunciation,

language patterns, and how to make a sentence. Likewise, participants also talk about the education company “Khan Academy”. As listening to the English language helps learners improve their language listening skills, this is why they watch “English movies and cartoons.” Furthermore, they translate Bangla into English using “Google Translate” to check if their language-making pattern is right or not. Also, participants use several free and paid English learning apps like “Hello Talk, FluentU, Hello English, and Duolingo” to learn the English language. Besides, several participants mention “Zoom Cloud” as they use it to attend English learning classes. In addition to these, there are also so many Facebook and Instagram Pages that aim to teach the English language using these “Social Media” platforms, as the participants say.

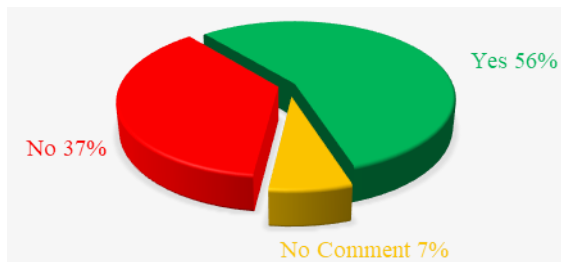


Figure 9. Use of latest educational technology by institutions

In this questionnaire, it was asked if respondents use the latest EdTech or not. The pie chart of the result shows that 56% of the participants’ institutions use the latest version of technology to ensure better learning, while 37% do not have the latest EdTech. Also, 7% of participants made no comment on this question.

Things/persons that inspire learners to utilize EdTech in EFL learning		
Parents	Friends	Seniors
Teachers	Duolingo	Necessity
Inspired by own	Current needs	Social media
Family members	Social influencer	Modern Technology
YouTube channels	Hollywood movies	Easy access to the platforms

Figure 10. Things/persons that inspire learners to utilize EdTech in EFL learning

Surroundings and circumstances influence learners to use educational technology for better learning English as a foreign language. In this regard, family members, parents, teachers, friends, social influencers, and seniors inspire learners to utilize EdTech by letting them know its advantages. In addition to these, sometimes learners realize its advantages for their own interests. Moreover, there are several apps like Duolingo, video sharing platforms such as YouTube, and Social Media (Facebook, Instagram) through which learners may learn English easily, as indicated in their responses. Also, as it is an era of modern

technology and learners get easy access to it, they utilize EdTech for better learning English as a foreign language. The participants also mention English movies, which inspire them to utilize EdTech for EFL learning.

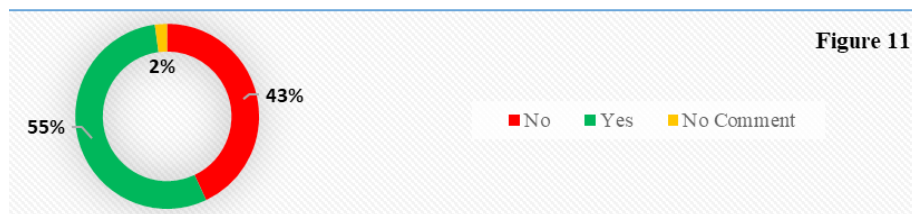


Figure 11. Availability of adequate training for using technological devices

More than half (55%) of respondents mentioned that their teachers are given enough training on running the educational technology or device by their institutions for better learning. But, at the same time about half (43%) of respondents gave a negative answer while only 2% of respondents did not share their opinions about the matter.

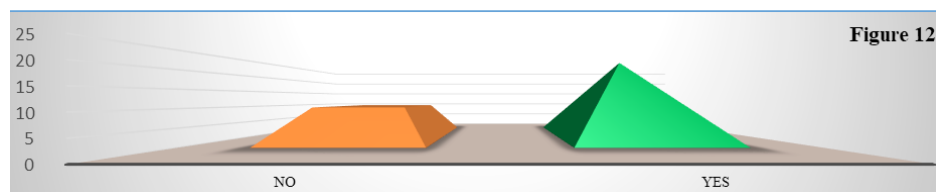


Figure 12: Whether the students are used to technological devices or not

In this figure, the two pyramids show a different scenario. The full pyramid on the right side stands for “yes,” meaning that the students are used to technological devices and different types of apps. More than 60% of participants acknowledge that fact. On the other hand, almost 40% of participants convey that they are not used to those devices.

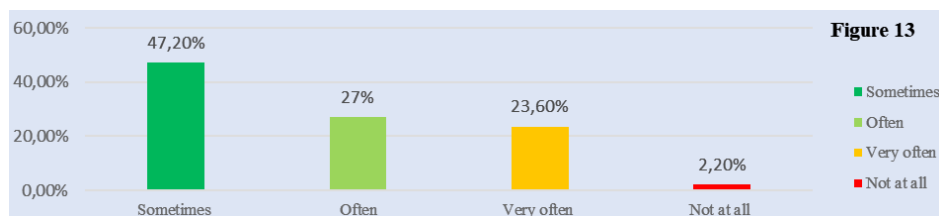


Figure 13. How often students use EdTech

Regarding the utilization of educational technology (EdTech) in their learning endeavors, a substantial proportion of participants, specifically 47.20%, expressed occasional engagement, whereas 27% reported frequent utilization. Notably, 23.60% of respondents indicated very frequent usage of EdTech for

learning English as a Foreign Language (EFL), while a mere 2.20% affirmed the non-utilization of such technological tools in their educational pursuits.

In Bangladesh, there are a number of problems with utilizing EdTech which are mentioned by the participants, such as poor internet connection, inadequate infrastructure, uncomfortable classrooms, uninterrupted electricity, a lack of training, and unskilled IT officers in institutions. Also, participants mention several user problems, like a lack of updated or perfectly functional devices and difficulty in understanding the procedures. Besides, from a Bangladeshi perspective, participants convey their inability to afford the technological devices and the other elements needed to run the devices for learning. They have budget limitations, such as data packages that are very costly and limited access to technology or platforms because not all platforms are free, and several free platforms contain so many ads that break the participants' concentration. Sometimes, they face health problems like headaches and feeling bored and tired while utilizing EdTech for learning. Furthermore, they face social barriers, pronunciation problems, hesitation to speak in English, understanding the American accent, vocabulary problems, and a lack of a speaking partner to develop their language learning. Many individuals exhibit a perceived inadequacy in their English language proficiency, infrequent utilization of English, and a perception of English communication as a time-consuming endeavor.

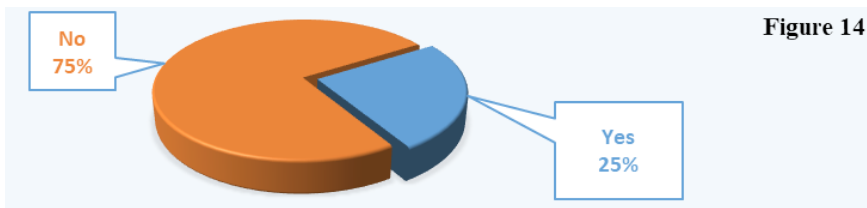


Figure 14. Availability of AR & VR, Extended Reality, Text Inspector, and Quizlet in the institution

This figure shows the availability of some technologies that are generally used in education in developed nations. In this survey, in Bangladesh, three-quarters (75%) of participants gave negative feedback to convey that their institutions do not use developed technologies like AR, VR, Text Inspector, and so on. But one-fourth (25%) of the participants gave positive feedback, and they conceded that these developed technologies are used in their institutions.

Discussion

Although almost all (95%) of the participants are familiar with EdTech, about half (52%) of them use it on a daily basis in their institutions for EFL learning, while the rest of them (48%) make use of it very often. About half of the educational institutions (57%) utilize multimedia projectors in a regular

manner when teachers use them for reading and showing different educational elements, while 37% of the institutions do not have the latest technology like interactive whiteboards, as the students said. However, in other cases, such as for writing, listening, and speaking, the use of a multimedia projector decreases while other devices like speakers and sound systems, computers, laptops, and interactive whiteboards are used in their institution to a lesser extent. The results also show that all kinds of technologies and devices are used less by colleges than by universities. Also, in very few cases, the participants' institutions utilize smartphones, online newspapers, writing tools, Microsoft Word, YouTube videos, Zoom Cloud, the internet, and online English language learning platforms. But around 22% of the participants in the study state that their institutions do not use any kind of EdTech for teaching reading, writing, listening, and speaking in English, while a good number of the students (20%) preferred not to answer this matter.

Besides these EdTech, students participating in the survey mention that they use several of the latest EdTech or educational platforms like Fluent U, Hello Talk, Hello English, Duolingo, Google Translate, Khan Academy, and social media for EFL learning on their own, where both free and paid courses are available. Moreover, they watch English movies and cartoons regularly and also watch videos on YouTube like TEDx Talks to improve their language skills. The availability of multimedia content, such as podcasts, TEDx Talks, language learning apps, and YouTube videos, coupled with online writing tools and language assessment platforms, empowers students to develop their listening, speaking, reading, and writing skills in an engaging and interactive manner. Almost all students responding to the questionnaire have smartphones, so they utilize these EdTech tools and platforms in their own time and places for EFL learning. Besides, more than 60% of participants agree with the statement that they are oriented towards these technologies and platforms. They like it because there are opportunities to learn in an interactive manner by watching videos, graphs, pictures, conversations, stories, real-life incidents (news), and so on. Additionally, parents, family members, seniors, social influencers, teachers, and friends motivate learners to take advantage of EdTech's amenities. Therefore, around 80% of the students participating in the study state that they are enthusiastic to use these EdTechs, and they do it most of the time.

Despite these possible benefits, the study finds some challenges and barriers in terms of implementing EdTech in Bangladesh. Several notable complications in institutions shared by the participating students are inadequate infrastructure (26%) for implementing EdTechs, unstable internet connections, a lack of the latest devices, and unskilled IT officers. Likewise, technical glitches, problems with electricity, or unreliable access to electricity can disrupt students' engagement with educational technology. Furthermore, their institutions (75%) do not use any developed technologies such as AR, VR, or Text Inspector. The

findings also show that the teachers (43% of the institutions) are not given any proper training for running the devices, and about 40% of the students are not used to the technologies and devices. Because the operating system of the technologies is a bit difficult for them, they face some difficulties while running the devices. Some students struggle with basic computer skills, navigating online platforms, or effectively utilizing language learning apps and tools. The participating students in the study concede that data packages are very costly; few of them are able to afford the devices, and there is also limited access to some platforms because they are paid. A number of the students are not that interested in any paid EFL learning platforms, though the free platforms break the learner's concentration because they contain so many ads. Also, sometimes it creates hazardous situations for the learners. They face health problems like headaches and feeling bored and tired while utilizing EdTech for a long period of time. Furthermore, they hesitate to speak English before other people; they also face pronunciation problems, a vocabulary shortage, a lack of a speaking partner, and difficulty understanding the American accent.

Limitations

There are several notable limitations to this study. One of the prime limitations of this study is that it was not possible to reach all the universities and colleges in Bangladesh to conduct the survey. Most of the data was collected through Google Forms. Besides, the sample population is of 100 students from different universities, which is comparatively small to get better findings and generalize the outcomes for the whole country. Moreover, only a total of 15 private and public universities and 4 colleges have been covered for the survey. The requirements, effects, and outcomes of EdTech might be different for other universities and colleges and their students. Also, no teacher has been included in the survey for the study. It would have been better if the teachers' points of view had been taken into account. In addition to this, no name or gender has been recorded for the study. The physical observation of the students and their institutions was not included in the study while utilizing EdTech. Furthermore, there were time limitations for the survey, which is why the participants were compelled within a certain period of time to give the answer to the questionnaire. The answer would have been more reliable and broad if they had had more time.

Recommendations

The government and relevant stakeholders should prioritize improving internet connectivity and uninterrupted power supply across the country, especially in rural areas. This can be achieved through infrastructure development, expanding broadband access, and utilizing innovative solutions like satellite internet technology. Hossain and Haque (2022) suggest that "The universities should provide sufficient logistic support to both the teachers and the students in terms

of essential technological devices and speedy internet facilities” (p. 293). Also, the government should implement comprehensive digital literacy programs and training that provide students, teachers, and the wider community with the necessary basic computer skills to effectively use EdTechs. Ali and Dmour (2021) as cited by Hossain (2022), say that students must be offered proper training on the technologies and devices so that they can utilize them properly. Moreover, with the collaboration of technology companies and partnerships with non-profit organizations, affordable access to devices such as laptops, tablets, and smartphones and data packages for students needs to be ensured at cheap rates, especially for those who are from economically disadvantaged backgrounds. Furthermore, the government should formulate policies that support the use of EdTech in the education system. These policies should address issues related to infrastructure development, curriculum adaptation, digital literacy, ensuring expert teachers and their training, content localization, technology-based seminars, lab facilities, and affordable access to devices. It is also important to ensure interactive multimedia content and adaptive learning platforms to enhance language acquisition and engagement in the technology-based seminar and lab facilities.

In addition to these, institutions need to ensure more updated EdTech devices like those used in developed countries like the USA, Canada, etc. Also, teachers and students need to be comprehensively familiar with those devices and their functions. Learning platforms and channels should create good content, courses, or modules that are developed especially for Bangladeshi EFL students and that can offer interactive speaking activities, grammar drills, pronunciation help, and vocabulary development. These platforms might offer interactive exercises, video lessons, virtual classrooms, native English-speaking chat rooms, and video tutorials.

Conclusion

Using EdTech in EFL learning in Bangladesh is not only a necessity but also presents exciting opportunities for innovation and has far-reaching implications. The key findings of this study assert that Bangladeshi EFL learners use EdTechs to a great extent. Students also use different learning platforms personally besides their institutional EdTechs. Yet, there are difficulties like inadequate training for both students and teachers, logistical support, and economic problems for students. The challenges students face in accessing quality English language education can be overcome through the effective use of EdTechs by removing barriers, making it easy to access, and so on. By embracing interactive language learning platforms, digital language learning apps, virtual language exchanges, and online language learning communities, students can engage in self-paced learning, practice language skills, and interact with English speakers worldwide. These technological tools offer flexibility and accessibility, enabling students to learn English anytime, anywhere, and at their own pace.

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