

## **THE IMPACT OF TECHNOLOGY-ENHANCED EFL READING CLASSES ON LEARNERS' PERFORMANCES AND PARTICIPATIONS**

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### **Abstract**

The paper analyzes learners' performances, attitudes, preferences, expectations, and judgments to estimate the contemporary impact of Technological-enhanced Language Learning (TELL) in the higher secondary EFL reading context of Bangladesh. The research is conducted among 3 higher secondary level schools in Dhaka City. These schools use both traditional modules and technology-enhanced modules to teach the students. The research utilizes a mixed method approach to address the current gap in studies in regards to a lack of research that emphasizes evaluating the impact of technology-enhanced classes in the higher secondary level EFL context in a developing country like Bangladesh. Findings reflect the implication of technology in producing Krashen's (1981) low affective filter in the pedagogical reading environment by creating a conducive and comprehensible reading sphere. This also helps in promoting learners' reading interests and motivation. The findings also highlight the fact that technological interventions in reading classes help alleviate their performances and participation in EFL classes. However, the findings manifest a limitation in using such technological modes in developing learners' academic reading skills in the developing country context of Bangladesh. The study concludes by drawing on some learner-oriented suggestions to improve technology-enhanced EFL reading classes in the particular context.

**Keywords:** EFL, higher secondary level, reading skills, technology-enhanced learning.

### **INTRODUCTION**

In many parts of the world, education practitioners and institutions have invested efforts into increasing the use of technologies in diverse forms to meet the demands of the current pedagogic markets and bring varied and modern learning choices to their learners. In this regard, technology provides learners the opportunity to regulate their learning process and gives accessible information (Ahmadi, 2019; Chuang, 2014). This technological implementation can help the mastery of some fundamental academic language skills among learners. Such skills include reading, writing, speaking, and listening in English. The importance of implementing technology to improve the reading skills and habits of learners has also been manifested in several contemporary global research (Capodiecici et al, 2020; Henry & Mohamad, 2021). In this regard, technology-enhanced English as a Foreign Language (EFL) reading classes can have pivotal impacts.

According to the definition by Kirkwood and Price (2014), Technology Enhanced Learning (TEL) refers to the use of information and communication technologies in the pedagogical teaching-learning process. Technology-enhanced Language Learning (TELL) deals with the impact of technology on teaching and learning a foreign language. In this regard, Selwyn (2010) classified the pedagogically implemented technologies into two orders; first-order innovations, and second-order innovations. He described the first-order innovations as prevalent among many technology-rich learning environments and

this includes blogs, wikis, social networking sites, virtual learning environments (VLE), laptops, netbooks and tablet PCs, and interactive whiteboards. Besides, the second order has been manifested as disruptive innovations persisting on the periphery of the teaching-learning sphere which gains more prominence in pedagogy at present and includes augmented reality (AR), simulations, digital games, remote-response systems, electronic books, etc.

In order to understand why technology can enhance the reading comprehensibility of learners, Krashen's (1981) input hypothesis can provide valuable insight. The hypothesis asserts that any method can be conducive to language acquisition as long as it ensures comprehensible input in a low-affective filter environment. Technology in reading classes can aid the creation of such an engaging and conducive reading environment to stimulate the process of comprehensible input among the learners. Furthermore, as learners' learning styles and preferences are different from one another (Gardner, 1983), thus, to cater to these individual needs of the learners, technology can play a pivotal role in providing the necessary sensorimotor stimuli for individual learners. Finally, technology can play a pivotal role in learners' schema activation in reading classes. Rydland, Aukrust, and Fulland (2012) asserted that while reading an interaction between the reading text and the readers' previously learned knowledge takes place. This schema activation plays a decisive factor in the success of reading comprehension. In this regard, research by Clark and Paivio (1991) showed eight times higher recall among students for vocabulary presented with pictures. Ponce, López, and Mayer (2012) reported similar positive gains when a computer program for reading comprehension instruction was used as a part of the curriculum. Moreover, it has also been found beneficial in silent reading as well as in both intensive and extensive reading approaches (Cohen, 2011; Lin, 2014).

Prior research in technological implementations in EFL classes in Bangladesh provides valuable insights. A practical implication of this is noted in Save the Children's research in the Bangladeshi EFL context (Parvin & Salam, 2015). Here, Save the Children introduced technology in some primary school classrooms in Bangladesh with the hope of improving language teaching and learning practices. The major findings of the focus group discussions with the students found that all learners enjoyed the English classes. The research also showed that the students benefited significantly from reading texts on mobile technology due to its easy accessibility to most of the learners. However, Ivy's (2012) research on the limitations of EFL classes in Bangladesh, in general, asserted problems with insufficient teacher training and practice in the use of technology. There were logistic issues with maintenance and troubleshooting as well. Again, budget issues are another concern in implementing technology in the EFL context of Bangladesh.

Here, it is to be noted that in the National Curriculum and Textbook Board (NCTB) of Bangladesh, the learning of the English Language is defined as "an essential work-oriented skill that is needed if the employment, development and educational needs of the country are to be met successfully" (as cited in Haider & Chowdhury, 2012, p.12). Thus, to ensure this work and academic skill focus development of English language learning among the learners, the implementation of technology is a crucial primary step as it plays a pivotal role in transforming the traditional teacher-centered classroom into a learner-centered one (Guerza, 2015; Mihaela & Magdalena, 2017; Riasati, Allahyar & Tan, 2012). Although such technologies, e.g., projectors, computers, and so forth are utilized in many

of the higher secondary level institutions in the country at present, it remains to persist as a domain that requires more rigorous research to estimate its broader implications in the particular EFL context. Given the limited proportion of technology-enhanced EFL reading classes and relevant research on such classes in the higher secondary level context of Bangladesh, there is a need to identify the contemporary impact of such classes on the reading and learning process of the learners. In addition, there is a further need to identify the perception of the pedagogic participants towards such technology-enhanced EFL reading modules. As learners and teachers are the primary users and beneficiaries of such technology-enhanced EFL reading classes, the current research will evaluate the various dimension, impacts, and limitations of such technological interventions in the higher secondary EFL reading sphere in Bangladesh. This research is conducted by analyzing the learners' and teachers' perceptions and opinions in this regard and will also attempt to identify and evaluate suggestions from the pedagogic participants to improve such technology-enhanced EFL reading classes.

## **METHOD**

### **Research Design**

The research employed a mixed method approach and collected the necessary data for the study by utilizing three data collection instruments- a survey questionnaire, semi-structured Focus Group Discussions (FGD) with the learners, and semi-structured interviews with the teachers. A concurrent triangulation design was used in this mixed-method approach which involved collecting quantitative and qualitative data at the same time, analyzing the two sets of data separately, and comparing the two data sets for triangulation purposes. The reason for choosing a concurrent triangulation design is based on prior research reviews in this regard, most of which follow a concurrent triangulation design in the mixed-method approach to ensure the appropriate triangulation of data and its validity and reliability.

### **Participants**

The research focused on higher secondary level schools as the presence of technology-enhanced reading classes was found to be more prominent in the particular level as compared to primary and secondary level schools in the country, based on initial observation and pilot studies. For this study, the researcher selected 3 Higher Secondary level schools by purposive sampling technique based on the knowledge that they utilize both technology-enhanced and traditional modules in the EFL teaching-learning process. All the schools are private schools in Dhaka city and follow the Bangladeshi NCTB curriculum in the teaching-learning process. For the sake of this research, the schools will be addressed as School A, School B, and School C. For the data collection process, 309 higher secondary students from the 3 schools were selected by a simple random sampling technique. Random sampling was conducted among Grade XII students as they have at least a year to experience language learning in such technology-enhanced EFL classes at the higher secondary level. Thus, this can provide more in-depth perceptions and opinions regarding the impact of such technological interventions in such classes. The average age group of the sample ranged between 17-19 years and it consisted of learners from different subject backgrounds, i.e., arts, commerce, and science, as EFL is taught as a general subject at the higher secondary level. The population consisted of 109 female students and 200 male students.

Moreover, 6 teachers (2 from each school), who take the EFL classes, were also interviewed to evaluate the learners' performances and participation in such technology-enhanced EFL reading classes. In choosing 2 teachers from each school, a purposive sampling technique was used so that it involved selecting 1 teacher with more than 5+ years' experience of teaching at the higher secondary level and 1 teacher with less than 2 years of experience at that level. Araujo et al. (2016) associate 0-3 years of teaching experience with novice/less-experienced teachers and 5+ years of experience with more experienced ones. Thus, in total, out of the 6 selected teachers (2 from each school), 3 were more experienced and 3 were relatively new to teaching EFL at the particular level. Here, a numerical anonymous denoting technique will be used to address the teachers in the study. Thus, Teacher 1, Teacher 2, and Teacher 3 will be used to denote the novice/less-experienced teachers, and Teacher 4, Teacher 5, and Teacher 6 will be used to denote the more experienced ones in School A, School B, and School C respectively. The idea of this selection process was to see if there are any perspective differences regarding Technology-enhanced EFL reading classes among novice teachers with that of more experienced ones.

### **Data Collection and Analysis**

A survey questionnaire consisting of 25 closed and open-ended questions (Hyman & Sierra, 2016) was constructed to collect the learners' attitudes, preferences, and opinions about technological interventions in EFL classes to facilitate the development of their reading skills and comprehension. The questionnaire was based on Rosset's (1982) framework and included attitude, preference, problem identification, and learner skill-focused question items (as cited in Brown, 1995). Here, question item no. 1-6 evaluated the attitude of the learners toward technological implementations in EFL reading contexts and item no. 7-12 evaluated their opinions on the opportunity to develop reading skills and comprehension in the current technology-enhanced EFL classes. Furthermore, item no. 13-18 evaluated the learners' preferences for different modes of technology-assisted reading content (e.g., blogs, articles, texts with auditory-visual contents, online reading tests, etc.) in pedagogical contexts for improving their reading skills. In this regard, question item no. 19 asked the learners to incorporate subjective opinions about any other preferred mode of technology-assisted digital reading tools that are not included in the previous item questions. Again, question no. 20 evaluated the frequency to which these preferred technology-enhanced contents are used in contemporary EFL reading classes.

The responses to question items 1-18, following a 5-point Likert scale, were subjected to mean calculation through Microsoft Excel 2016 and arranged on the Likert's measurement Index. This quantitative segment required participants to tick one of the five given options from Likert's scaling that best suited their individual perceptions of the statements. Here, the interpretation key of learners' responses in the specified question part was as follows: 1-1.80= they completely disagree with the statements; 1.81-2.60=they somewhat disagree; 2.61-3.40=they have a neutral attitude; 3.41-4.20= they somewhat agree with the statements and 4.21-5= they completely agree with the statements. In question no. 20, the provided options were "Always", "Often", "Sometimes", and "Never". Moreover, questions no. 21, 22, and 23 were based on the learners' perception of preferred technological modes (computer, mobile, etc.) in the EFL reading classes and the extent to which these technological modes are implemented at present. Finally, in question no. 24, the respondents were asked to choose from a given

list of limitations that they encountered in multimedia-assisted EFL reading classes, and in question no. 25 they were asked to place their subjective opinions in regards to the limitations as well.

The research also used semi-structured FGD as a crucial research instrument. The researcher conducted three semi-structured FGD sessions which each lasted around 60 minutes. In each session, nine students were selected by random sampling technique from the total research sample. The FGD-s focused on three topic areas- expectations, judgments, and suggestions- about learners' perceptions of technology-enhanced EFL reading classes. The questions were adapted from Hargreaves and Seale's (1981) study to fit the current research context and additional questions to collect the students' suggestions in this regard were incorporated. Furthermore, a semi-structured teacher interview guideline was also developed to collect information from the teachers regarding the students' performances, participation, interests, and attitudes towards technology-enhanced EFL reading classes as compared to the traditional language classes with no technological interventions. In this regard, question 1 of the teacher interview enquired about students' participation in the technology-enhanced reading classes as compared to the traditional ones. Again, question 2 inquired about the student's interests and question 3 inquired about the student's reading comprehension and memory retention in this regard. Finally, the teachers were asked about the students' performances in technology-enhanced EFL reading modules and the traditional ones. To evaluate the qualitative findings of the study, the researcher coded the salient categories in the qualitative data (Gibbs, 2007) from the questionnaire, FGD-s, and interviews by reading and listening reflectively to the contents several times.

## **FINDINGS AND DISCUSSION**

For identifying the role, impact, and limitations of technology-enhanced EFL reading classes at the higher secondary level in Bangladesh, the researcher has calculated and deduced the findings under the following sub-headings:

### **Students' Performances in Technology-enhanced EFL Reading Classes**

Here, the teachers' interviews attempted to unravel the proportion of learners' performances, interests, reading comprehension, and participation in technology-enhanced EFL reading classes as compared to the traditional EFL reading classes without such technological interventions. The percentage deduction of the responses in Table 1 denotes the proportion of learners' participation, performances, interests, and reading comprehension in technology-enhanced EFL reading classes as compared to the traditional ones. In the teacher-oriented interview segment, most of the teachers asserted that the students' participations, comprehensions, learning retention, and interests are more in technology-enhanced reading classes as compared to the traditional ones, as can be demonstrated by the data in Table 1. In this regard, teacher 2 noted that – "Technology-enhanced reading classes come with audio-visual stimuli and more varieties of reading text and exercises. Due to this, we see better memory retention and comprehension among the learners." However, an interview with another teacher (Teacher 5) presented a slightly different perspective stating, "I often think that technology can serve as a distraction rather than a boon in reading classes." Similar positive and negative perceptions towards technology use were also noted in the interviews with Teacher 1 and Teacher 4 respectively; with Teacher 3 and Teacher 6 taking a more neutral stance in this regard.

Thus, we see a perspective difference between novice teachers, who are more willing to adopt technology in the EFL pedagogic process, compared to more experienced teachers, who prefer the traditional mode of EFL teaching.

**Table 1. Calculation of Teachers’ Responses Regarding Learners’ Participation, Interests, Comprehension, And Performances**

<b>Criteria</b>	<b>Better in technology-enhanced EFL reading classes</b>	<b>Better in traditional EFL reading classes without technological interventions</b>	<b>Same for both modules</b>
Learners’ participation in the classroom process	62.5%	37.5%	0%
Learners’ interests in the classroom process	75%	25%	0%
Learners’ reading comprehension and retention	62.5%	37.5%	0%
Learners’ performances in reading assessments	25%	0%	75%

Thus, in the percentage evaluation in Table 1, it is observed that in the case of students’ participation, interests, retention, and reading comprehension, the teachers’ responses denoted higher participation and interest in technology-enhanced EFL reading classes as opposed to the traditional ones without such technological interventions. In regards to English reading performances in assessments, the teachers’ response percentage manifested that it is the same in both modules. In this regard, Teacher 4 in the interview segment noted that – “Although we can use technology-enhanced classes to provide various digital reading texts to the students via computers, projectors and sometimes mobiles as well, however, the assessment modules usually follow a traditional form of EFL reading skill evaluation process. That is, due to various limitations, we have not been able to include the technology-enhanced modes in the assessments of EFL courses.” Overall, the findings from the teacher interview data denote better participation, interest, and reading comprehension among the students in technology-enhanced EFL reading classes.

**Attitudes towards Technological Interventions in EFL Reading Context**

Based on the evaluation of the survey data, the students’ attitudes towards technology-enhanced interventions to promote their EFL reading skills and comprehension are presented in Table 2:

**Table 2. Calculation of Learners' Responses To The Attitude-Based Question Items**

No	Statements of Questionnaire	Mean of Responses	Average
1	I think using digital reading content (web pages, online articles, etc.) is more helpful in increasing my reading comprehension than only relying on course book materials.	4.36	4.28
2	I think reading texts from varied technological sources (Mobile, laptops, etc.) can make the classes more interesting.	4.52	
3	I will be more motivated to read if a wide range of digital content is provided along with the course materials.	4.50	
4	I think there should be more reliance on technology for providing varied reading texts.	4.08	
5	I am comfortable with using technology along with the existing course materials to improve my English reading skills.	3.93	
6	I think the use of technology in English reading classes makes them more engaging and participatory.	4.30	

Thus, it appears from the above-presented findings that the mean for statements no.1-6 of the questionnaire response ranges within the Likert's scaling of 3.41-4.21 and 4.21-5, thus, implying that most of the learners have a partial or complete positive attitude towards the use of technology in ESL reading context. Again, the average mean of 4.28 asserts that the students completely agree that technology has a positive impact on their motivation, engagement, and interest in the EFL reading classes. To assess this attitude, it is imperial to assess the learners' judgments and expectations regarding technology-enhanced reading classes as well. As such, in the FGD segment, the learners were asked about their expectations and hopes from such technology-enhanced reading classes. In this regard, the findings revealed that all the learners have high hopes and positive expectations from technology-enhanced reading classes. Students in one of the FGD sessions noted that- "We expect technology-enhanced reading classes to be more engaging, interesting, and productive than traditional reading classes without technological interventions. It should not be boring, monotonous, and passive like the traditional EFL classes where we only read printed texts and solve textbook exercises and there is little to no variation in the contents." Another FGD session, in this regard, asserted that - "The classes should help us build our reading abilities and, at the same time, provide us with a fun and engaging language-learning atmosphere". In short, all three FGD sessions asserted that their expectations from technology-enhanced EFL reading classes included aspects like getting exposure to a conducive learning atmosphere, getting better opportunities to develop their reading skills, etc. Again, expectations regarding providing better opportunities to prepare for future language exams, opportunities to develop the learners' technology usage skills, etc. were also manifested in the sessions.

From the aforementioned findings, the attitudes, expectations, and judgments of the learners assert the positive perceptions that they have towards such technological intervention in EFL reading classes. Therefore, like the aforementioned study of Save the Children in the context of Bangladesh by Parvin and Salam (2015), the attitude-based questionnaires and the FGD findings of the current research also reveals a similar positive perception of the learners towards the implication of technology in enhancing their reading comprehension in the higher secondary EFL classes. The students also asserted in the FGD sessions that technology helps manifest a positive impact in promoting a conducive learning environment in the class and makes them more enthusiastic and participatory in the classroom process. Here, the findings of the study align with the findings in Riasati et al.'s (2012) study, which manifest the positive impact of technology on learners' interests, attitudes, and motivation in the EFL teaching and learning process. The learners' perceptions also entail the aspect of a higher proportion of retention of reading contents in technology-enhanced classes, which resonates with Clark and Paivio's (1991) aforementioned study.

### **Impact of Technology-enhanced EFL Classes on Reading Skills and comprehension**

The skill-focused question items evaluated the learners' perceptions of the impact of technology-enhanced classes in providing required opportunities to develop their reading skills and comprehension in the higher secondary level EFL context. The findings in this regard provide valuable insights as in Table 3.

**Table 3: Calculation of Learners' Responses To The Language Skill-Focused Question Items**

No	Statements of Questionnaire	Mean of Responses	Average
7	I get sufficient practice in the reading activity of searching for key information (keywords, vocabulary, numbers, etc.) in the technology-assisted texts and exercises provided in the class.	1.84	
8	In the classes, I get sufficient practice in reading to catch the main gist (theme, structure, genre, etc.) in digital or technology-assisted reading content.	3.42	
9	Reading for obtaining specific details in technology-assisted content is sufficiently practiced in the classes.	2.07	
10	As the digital reading passages in technology-enhanced EFL classes come with audio, picture, or motion video so they are easier to understand than texts without such features.	4.5	2.595
11	A sufficient amount of technology-assisted long texts for pleasure reading are provided in technology-enhanced classes.	1.64	
12	A sufficient amount of timed reading and exercise solving are practiced with the technology-assisted reading texts.	2.10	



In the above findings, it is observed that only in the case of question no. 10 there is a mean score of 4.5, which asserts that the learners completely agree that the use of multimedia-assisted texts in classrooms aids their reading comprehension. Moreover, only in the case of question no. 8, the mean score implies that the learners partially agree that a sufficient amount of reading for gist is practiced in such technology-enhanced classes. In the case of question no. 11, the mean data asserts that they completely disagree with the statement that extensive reading practices with technology are conducted in the classes. The rest of the response means delves in the range of 1.81-2.60, which denotes that they partially disagree with the statements, and sufficient reading practices related to skimming, scanning, speed reading, etc. with digital reading contents are not exercised in the technology-enhanced EFL classes. Furthermore, the average mean score of 2.595 in this segment also highlights their partial disagreement in the overall segment and asserts that the aspect of reading skills and sub-skills development with technology in the technology-enhanced EFL classes are not properly implemented.

Here, the skill-focused statement questions inquire about the impact that current technology-enhanced classes play on developing the learners' skills and comprehensibility in EFL reading spheres. In regards to the quantitative findings, the low mean score in most of the question items asserts the fact that the learners do not get sufficient opportunities for skill development with technology in the classes. Again, in the skill-focused questions, the learners noted that reading contents, which come with audio-visual stimuli, aids their comprehensibility more than texts without such stimuli. In this context, although technology does play a significant role in activating learners' schema through sensorimotor exposure, alike the aforementioned study by Rydland et al. (2012). However, it does not have a similar positive impact on developing their extensive or intensive reading skills. Thus, the findings highlight the low mean score in intensive reading skills of skimming, scanning, speed reading, etc., and also asserts that no opportunity for extensive reading for pleasure is provided in the classes either. Here, the mean score in "reading for gist" does imply that some reading skills practice is still conducted in the technology-enhanced EFL classes. However, the reading skills, which require more practice opportunities to acquire and learn, like skimming, scanning, etc., are not appropriately provided and practiced in such classes. Therefore, the findings regarding the current impact of technology-enhanced EFL classes on developing the reading abilities of the higher secondary level learners in Bangladesh highlight that technology has a positive impact on increasing the learners' general reading comprehensibility. However, the prospect of reading skill development with technology in the particular context is still not sufficiently explored.

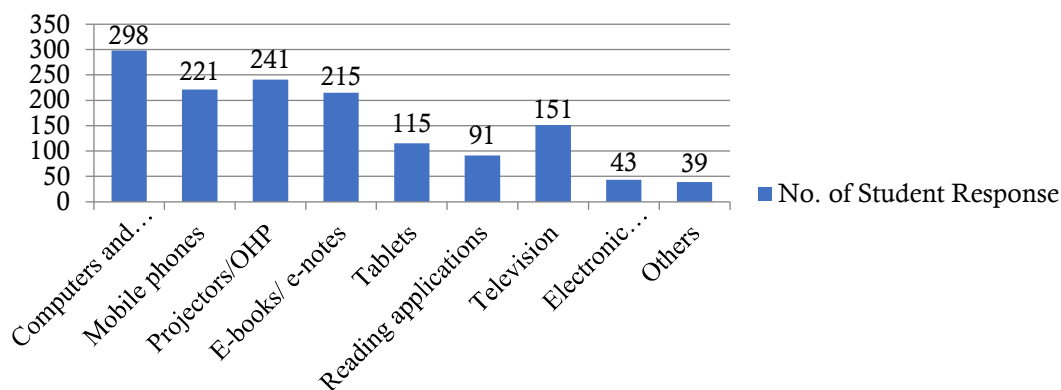
### **Learners' Preferred Modes of Technologies and Technology-assisted Reading Contents**

To estimate learners' participation and interest in technology-enhanced EFL reading classes, it is important to understand learners' preferred modes of technology and technology-assisted reading contents. The learners' responses in this regard are shown in Table 4.

**Table 4: Calculation of Learners’ Responses To Preference-Focused Question Items**

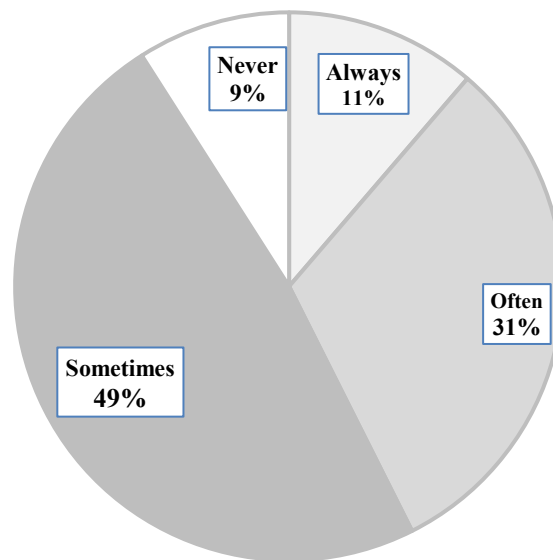
No	Statements of Questionnaire	Mean of Responses	Average
13	I prefer reading online content like news, blogs, articles, journals, etc. rather than only relying on course book content.	4.52	
14	I think digital resources like graphics, simulations, animations, etc. can make reading content more interesting.	4.5	
15	I think using digital reading content like online reading games, quizzes, etc. makes the reading classes more interesting.	4.1	4.28
16	I think access to virtual library content will make me more interested in reading classes.	4.67	
17	I like reading stories and content on social media (Facebook, Instagram, etc.) and think they can be used as reading resources in English classes.	3.93	
18	Online reading tests that provide instant results can help me make better preparation for an exam.	4.0	

Here, in statements 15, 17, and 18, a mean range of 3.41-4.21 was noted which asserted that the learners partially agree that using digital resources like online tests, quizzes, exercises, etc. are interesting to them and can make the reading classes more interesting. An average mean of 4.28 reflects that most students have a higher preference for technology-assisted reading content in reading classes than relying on printed textbooks only. Again, the subjective responses to question no. 19 also provided some other preferred modes of technology-assisted reading content for the students including stories, poems, novels, etc. available in different reading applications, formal and informal email reading contents, reading materials from web-based learning sites, e-book content, etc. Moreover, question no. 21 required participants to tick from a given range of technologies, which they would prefer to use in their reading classrooms. The findings in this regard are as in Figure 1.



**Figure 1: Bar Chart Representing Learners’ Preferred Technological Modes In EFL Reading Classes**

Again, in response to the subjective portion of question no.22, the students provided valuable insights. Some of the other preferred modes of technology in reading classes, as asserted in the subjective segment, consisted of better auditory systems for larger classes, better internet connectivity, slideshow accompaniment with texts, better reading software, etc. Furthermore, in response to questions no. 21 and 23, regarding what extent their preferred technologies and technology-assisted reading contents are used in the EFL reading classes at present, the following findings were noted:

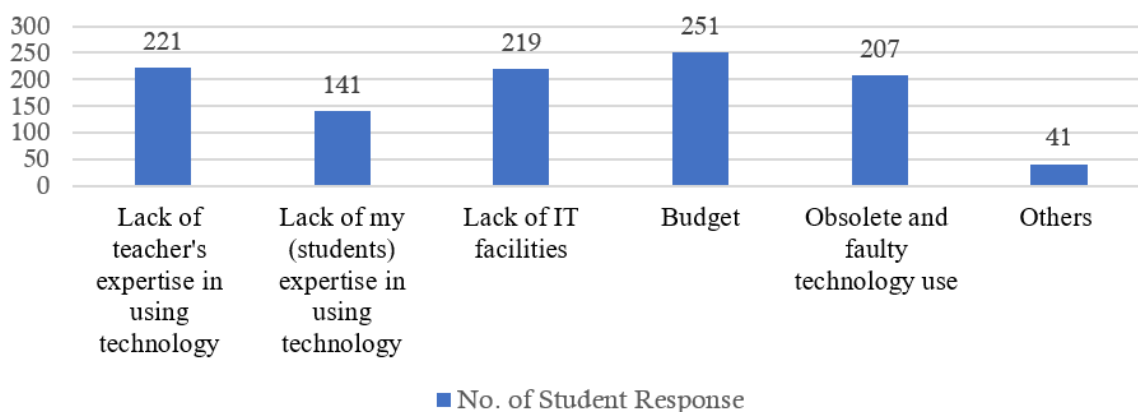


**Figure 2: Pie Diagram Representing Utilization Frequency of Learners' Preferred Technologies And Technology-Assisted Reading Contents In EFL Classes**

Therefore, the illustration above highlights the fact that the learners' preferred modes of technology and technology-assisted reading contents are only 'sometimes' implemented in the EFL reading classes. In this regard, only a few learners responded that their preferred modes are 'always' or 'never' implemented in the classes. Thus, in terms of the learners' preference-based findings, they show an increased preference for computers, mobiles, e-books, and tablets along with other technological modes in their EFL reading classes for providing technologically-enhanced digital reading materials and producing a conducive learning environment. Here, like the aforementioned study by Parvin and Salam (2015), mobile-based reading of digital content received more support in the particular segment, which highlights its high preference as a technological mode for reading among the students and its easy accessibility to the learners. Therefore, based on these data, it can be asserted that each learner have individual learning style and preferences and the context determines technological accessibility. Hence, there persists preference for varied technologies and technologically-assisted reading texts in the EFL reading classes. This denotes that there is a need to use both the first-order and second-order innovations of Selwyn (2010) in the EFL reading classes. However, despite the easy availability of some of these technologies, e.g., mobile, television, etc., and technology-enhanced reading contents, e.g., online quizzes, tests, webs, logs, etc., we see that their actual implementation is still limited based on the learners' perception-centered data. As such, a disparity between learners' preferences and provided technological modes and reading contents is noted in the findings. Such disparity often limits the positive role and impact of technology-enhanced classes.

### Limitations of Technology-enhanced EFL Reading Classes

In question no.24, the students chose from a given list of limitations, that they usually encounter in technology-enhanced EFL classes. The responses to this are provided in Figure 3.



**Figure 3: Bar Chart Representing Learners’ Responses Regarding Limitations In Technology-Enhanced EFL Reading Classes**

As such, from the diagram, lack of teachers’ experience, IT facilities, and budget represent the most pivotal drawbacks of such technology-incorporated reading classes from the learners’ point of view. The lack of the learners’ expertise in using technology and the lack of diverse technological modes also signifies crucial limitations as noted in the diagram. Furthermore, in regard to the subjective responses to question no. 25, other imperial limitations were highlighted. Some of the subjective opinions noted the aspect of the imbalanced use of technology in the reading classes. In this regard, one student wrote that- “Sometimes the technology is so much utilized that we don’t get enough reading practice opportunities in the class. At other times, technology is used only as a minimal visual input to go with the textbook content without serving an actual purpose.” Again, from the FGD findings, similar assertions regarding the imbalanced use of technologies in the classes were also noted as negative impacts of such technology-enhanced EFL classes,

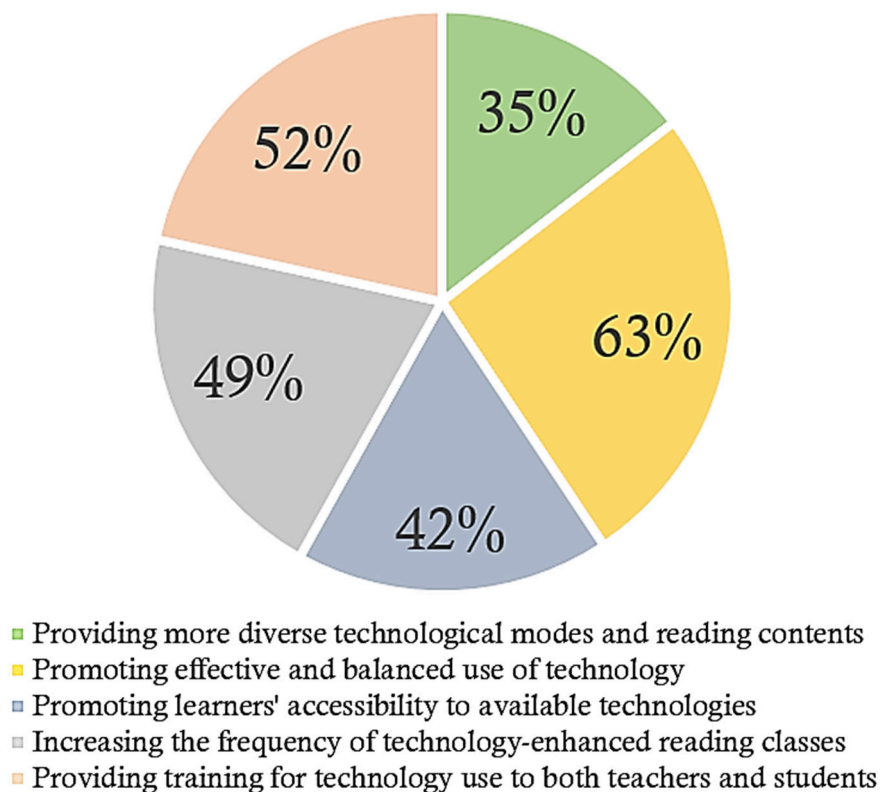
Therefore, the major negative impacts of technology-enhanced classes were noted in terms of creating a distractive, unproductive, and unappealing learning environment in reading classes due to imbalanced, faulty, and monotonous use of such technological mediums. Thus, in terms of the imitations of such technology-enhanced EFL reading classes in Bangladesh, valuable insights are obtained from the quantitative and qualitative findings. Here, some of the current limitations of the implementation of technology in the higher secondary EFL reading context are like those noted in the aforementioned study by Ivy (2012) in terms of lack of teacher training and expertise in technology use, lack of students’ expertise in technology use, lack of maintenance, lack of diverse technology due to budgetary issues, etc. However, more EFL context-specified limitations are also unraveled by the findings. The pivotal limitations of the classes, as manifested from the questionnaire and the FGD sessions, entailed imbalanced use of technology in the reading classes; lack of students’ accessibility to existing technological modes; lack of teacher’s

training to use the technology appropriately to develop the learners’ reading skills rather than only using it as a complimentary audio-visual stimulus, etc.

**Suggestions to Improve Technology-enhanced EFL Reading Classes**

Finally, in regard to the question of whether there is a need for further improvement in the technology-enhanced reading classes, all the students in the FGD sessions asserted that there is a need for improvement in such classes. In terms of the required improvements, the learners highlighted the following suggestions:

Learner-oriented Suggestions to Improve Technology-enhanced EFL Classes



**Figure 4: Pie Diagram Representing Learners’ Suggestions To Improve Technology-Enhanced EFL Reading Classes**

Therefore, the suggestions for improvement of the current technology-enhanced EFL reading classes at the higher secondary level in Bangladesh based on the learners’ perception-centered FGD findings encompass using technology in a more productive way to develop the learners’ reading skills; introducing more diverse technological modules and digital contents in classes; initiating better learner accessibility to these technologies, etc. The suggestions from the learners in this regard also manifested in using technology-enhanced classes to practice specific academic reading skills in the learning sphere rather than using it only as a visual complement to the printed texts. The suggestions correspond with the learners’ expectations and judgments regarding technology use in EFL reading classes and highlight that technology should not only be used as a tool to promote a conducive learning environment but also as a valuable pedagogic tool to develop the learners’ academic reading skills at the higher secondary level in Bangladesh.

## CONCLUSION

The study contributes to research in technological implementation in the EFL context of Bangladesh by highlighting the contemporary impact and limitations of technological interventions in the higher secondary EFL reading classes from a learner and teacher perception-centered study. The current study has found that most of the students hold positive attitudes and preferences toward the implementation of technology in the EFL reading context of Bangladesh. Here, the learners' perception-centered research found that the use of such multimedia classes in the EFL reading context is pivotal for developing a conducive learning environment that promotes autonomous and active reading among the students. Such multimedia classes also have a positive impact on developing the reading comprehension of higher secondary EFL learners in Bangladesh. However, the current study shows the limitation of the use of such technological tools in EFL classes to develop learners' academic reading skills and sub-skills. The study also highlighted the existing disparity between learners' expectations and classroom practices in terms of technologies and technology-assisted reading content used at a particular level. The small-scale study findings assert the need of conducting a more large-scale study on the contemporary implication of technology in the higher secondary level context of the country. There is a need for a more elaborate study to estimate a holistic image of the impact of such technology-enhanced classes on developing the language skills of the learners and to make informed decisions to incorporate the findings into practice at both the curriculum level and the individual classroom level in the EFL context in Bangladesh.

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