Impact of Technology Enhanced Language Learning (TELL) in Promoting ESL Learners' Reading Comprehensibility and Skills: Students' and Teachers' Perceptions

Nishat Tasneem

ID: 14103054

In Partial Fulfillment of the requirements

For

The degree Bachelors of Arts in ELT

Department of English and Humanities

BRAC University

66, Mohakhali, Dhaka-1212

December 2017

Keywords

Technology, English as Secondary Language Learning, reading skills, limitations, learner preferences.

Abstract

The paper documents on the learners' and teachers' attitudes, preferences and priorities in technological implementation in the ESL reading context of Bangladesh. The research is conducted among 3 Government-based Bangla Medium Schools and 1 NGO-based English Version School in Dhaka city. The specified schools were chosen by the researcher based on their availability of technological applications and its usage in language classrooms. The qualitative and quantitative data of the research showed relevance with that of former study by Patel(2014), Parvin(2014) etc. in favor of technological modes. The study reflects that technology plays a pivotal role in producing Krashen's(1991) low affective filter in pedagogical reading environment and, thus, promoting the learners' reading comprehensibility. However, the current research also provides more in-depth notion of the variation of learners' and teachers' opinion on the impact of technology in development of academic reading skills and sub skills, like skimming, scanning etc. This appears to be an unexplored and often neglected area in the domain of language learning and instruction giving for most Bangladeshi pedagogical settings. Again, the study also provides subjective and objective ideas about the possible limitations that tend to crop up in technologically advanced reading classes in an ESL context like Bangladesh.

Table of Contents

Chapter	Page
Chapter one: Introduction	12
1.1 Goal and Objective of the Research ----------	14
1.2 Research Questions----------	14
1.3 Methodology of the study----------	15
1.4 Limitations of the study----------	15
Chapter Two: Literature Review	17
2.1 Defining TELL ----------	17
2.2 The Growth of English Language Teaching and Learning through Technology -----	18
2.3 Impact of TELL in Enhancing Reading Comprehension in ESL Context.----------	19
2.4 Role of Technology in Promoting Learners' Reading Comprehension----------	21
2.5 Types of Technologies Used for Improving Learners' Reading Comprehension:----	22
2.6 Role of Learners in Improving Reading Skills in Multimedia Classroom----------	25
2. 7 Necessity of Using Technology for Increasing Learners' Reading Skills----------	27
2.8 Benefits of the Incorporation of Technology in ESL Reading classrooms ----------	29
2.9 Limitations of Using Technology in Language Classroom:----------	32
2.10 The Effectiveness of Using Technology in English Language Classrooms in Higher Secondary Level Schools in Bangladesh:----------	33
Chapter Three: Research Method	36

3.1 Background Information of the Research Process----------	36
3.2 Research Objective: ----------	37
3.3 Importance of the Study----------	37
3.4 Participants and Settings of the Research----------	37
3.5 Nature of the Research----------	38
3.5.1 Primary Research----------	38
3.5.2 Quantitative Research ----------	39
3.5.3 Qualitative Research----------	39
3.6 Research Design----------	40
3.6.1 Data Collection Procedure ----------	40
3.6.2 Research Instruments for Data Collection----------	40
3.6.2.1 Quantitative Data Phase: Survey Questionnaires ---	40
3.6.2.2 Qualitative Data Phase 1: Interview Session --------	41
3.6.2.3 Qualitative Data Phase 2: Observation----------	42
3.7 Methods of Analysis	42
3.7.1 Quantitative Data Phase: Survey Questionnaires ----------	43
3.7.2 Qualitative Data Phase 1: Interview Session ----------	43
3.7.3 Qualitative Data Phase 2: Observation----------	44
Chapter Four: Findings and Interpretations	45
4.1 Analysis of the Questionnaire----------	45
4.1.1 Analysis of Items (Statements and Questions) of the Survey----------	45
4.1.2 Data Calculation and Interpretation ----------	46

4.1.2.1 Attitude towards TELL in ESL Reading Context:----------	46
4.1.2.2 Impact of TELL in Enhancing Learners' Reading Skills:--	53
4.1.2.3 Evaluating Learners' Preferred Technological Mode -------	57
4.1.2.4 Types of Technology Used in Language Classroom---------	63
4.1.2.5 Benefits of Learning with Technology ----------	66
4.1.2.6. Limitations of Learning with Technology----------	67
4.2 Qualitative Survey 1: Interview Session with "Target" and "Resource" Group -----	69
4.3 Qualitative Survey 2: Observation of the Multimedia Assisted Reading Classes-----	71
4.3.1 Technology-assisted Reading Inputs being Provided to Learners --------	72
4.3.2 The Participation of the Students in a Multimedia Reading Classroom----	72
4.3.3 The Reading Skills that are Exercised by the Learners in TELL Classes—	73
4.3.4 Observed Limitations of the Multimedia Reading Classes----------	74
Chapter Five: Discussion/Analysis:	75
5.1 Students' Expectation & Preference of Technology Use in the classroom----------	75
5.2 Limitations of TELL in ESL Reading Context of Bangladesh----------	77
5.3 Using Technology to Enhance Reading Comprehension & Skills:----------	80
5.4 Theoretical Perception of Technological Implementation to Promote Reading Skills: ----------	81
5.5 Conglomerating Tradition with TELL in Promoting Reading Skills and Comprehension: ----------	82
Chapter Six: Recommendations	84
Chapter Seven: Conclusion	86

Reference	88
Appendices:	
Appendix A----------	101
Appendix B----------	109

List of Figures:

Figure no.	Figure Title	Page no.
Figure 1	Common and emerging innovations of technology-rich and enhanced learning environments (from Goff, 2013, p.5-6)-------	24
Figure 2	Pie diagram representing learners' preferred technological modes in reading classes. (based on learners' questionnaire response)----------	64
Figure 3	Pie diagram representing learners' preferred technological modes in reading classes. (based on teachers' questionnaire response)----------	66

List of Tables:

Table no.	Table Title	Page no.
Table 4.1.2.1 (a)	Mean calculation of the learners' response on the attitude based statement questionnaires----------	48-49
Table 4.1.2.1 (b)	Mean calculation of the teachers' response on the attitude based statement questionnaires.----------	50-52
Table 4.1.2.2 (a)	Mean calculation of the learners' response on the language skill focused statement questionnaires----------	53-54
Table 4.1.2.2 (b)	Mean calculation of the teachers' response on the language skill focused statement questionnaires----------	55-56
Table 4.1.2.3 (a)	Mean calculation of the learners' response on the learner preference focused statement questionnaires----------	58-59
Table 4.1.2.3 (b)	Mean calculation of the teachers' response on the learner preference focused statement questionnaires----------	60-61
Table 4.1.2.4(a)	Learners' preferred technological applications (based on learners' questionnaire response)----------	63
Table 4.1.2.4 (b)	Learners' preferred technological applications (based on teachers' questionnaire response)----------	65

.

Acknowledgement

First and foremost, I would like to thank the Almighty for being with me and for providing me the required strength and patience to complete my research. Next, I would like to present my cordial thanks and gratefulness to my research instructor, Syed Mohibul Haque. He has been highly supportive and patient throughout the whole process, and yet critical when required. He has provided me effective guidance with his knowledge and experience. Without his instructions and endeavors, the research would have been incomplete. I would also like to present my utmost gratefulness to the schools' authorities, teachers and students who accepted my proposal and helped me to collect the required data for my research and analysis. Finally, I would like to thank the other faculties from the department of English and Humanities of BRAC University along with my peers and family who provided moral encouragement and helped me in various ways, directly or indirectly, to complete my research.

Declaration

I hereby declare that this dissertation is based on my own research. Other contributions are included in my thesis paper with the required references. I declare that this paper has not been published or submitted before in any university or in any other institutions.

…….

Nishat Tasneem

ID: 14103054

BRAC University

December 2017

Chapter 1: Introduction

In many parts of the world, education practitioners and institutions have invested efforts into increasing the use of technologies in all its forms (for example, e-books, text messaging, wikis, and blogs) to meet the demands of competitive pedagogic markets and to bring a variety of learning choices to their learners. It has been widely reported that the advent of new technologies have a positive influence on both learners and teachers (Mansor, 2007). Again, Lam and Lawrence (2002) claims that technology provides learners the opportunity to regulate their own learning process and gives easy access to information that cannot be readily provided by the instructor. The potentially positive sides of incorporating technology have, thus, encouraged English as secondary language educators to apply its advantages to enhance pedagogical practices.

This technological implementation can help the mastery of some fundamental academic skills (Bean, 1996) among the learners which is essential at higher education levels. Such skills include reading, writing, speaking and listening in English. However, despite the importance of these skills for academic success, professors seldom teach them (Ibid). As reading and writing are emphasized in Bangladeshi board exams and as Corbett (2008) asserts that "reading makes the writer" (as cited in Motteram, 2013, p.34), therefore, development of reading skills among higher secondary level ESL learners cannot be overlooked. Technology, although can play a pivotal part in promoting such reading comprehensibility and skill development, is still, an unexplored domain in the sphere of Bangladeshi ESL context.

Here, it is to be noted that in the National Curriculum of Bangladesh, the learning and teaching of 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." The curriculum also marks a shift in the view of English language learning and teaching from a Grammar Translation Method (GTM) to a Communicative Language Teaching(CLT) one by the statement-"English should, therefore, be taught as something to be used, rather than as something to be talked about" (as cited in Haider and Takad, 2012, p.12). Here, to ensure this work and academic skill focus development of English language, in the domain of reading, writing, speaking and listening among learners in a CLT pedagogical context, the implementation of technology is an essential primary step. This use of technology plays a pivotal role in shifting the traditional teacher-centered classroom to a learner-centered one (Riasati, Negah and kok-Eng, 2012, p.25). This, in turn, helps to promote autonomous learning and takes the learners a step closer to becoming active readers in ESL reading sphere.

Here, the primary goal and objective of this research is to evaluate the learners' and teachers' perceptions regarding the implementation of Technology Enhanced Language Learning (TELL) in the development of reading skills and comprehensibility among learners in the ESL context of Bangladesh. In this regard, the research seeks to unravel some pivotal thought provoking questions regarding the issue, like- Do technology have a positive or negative impact on developing the reading skills and sub skills among learners in ESL reading context? Do the ESL learners, in the context of Bangladesh, prefer reading English contents in computer based technological modes or mobile based ones? Etc. The answers to this questions by the pedagogical participants will help to open up the scope of reconsidering and redefining the implementing of TELL in ESL reading context of Bangladesh. Furthermore, the study will also open up scope for future research regarding the practical application of TELL in learners' skill development in EAP, ESL and EFL pedagogical domains of Bangladesh. The research also

highlights some of the limitations that comes with the implementation of TELL in ESL reading context of Bangladesh as noted from the subjective and objective opinions of the research participants. The collected data of the research were calculated and analyzed by the researcher in an attempt to find out how the research participants conceptualize the development of reading skills and sub skills by the use of technology and multimedia and how they conceptualize its limitations.

1.1 Goal and Objective of the Research:

The primary goal and objective of the current research encompasses two main domains. These are as follows:

- Evaluating the role and impact of TELL in the development of reading comprehensibility and specified reading skills among learners in Bangladeshi ESL context based on quantitative and qualitative data of the research
- Identifying the possible limitations that come with the implementation of such technology enhanced reading modes in the ESL context of Bangladesh.

1.2 Research Questions of the Study:

The possible research questions to be answered in this study are-

- What are the learners' and teachers' attitude towards implementation of TELL in promoting ESL learners' reading comprehensibility and skills?
- What are the ESL learners' preferred technological modes (like- Internet, Reading games, PowerPoint presentations etc.) in enhancing their reading comprehension and skills?
- Do the ESL learners prefer acquiring and exercising reading skills and sub skills with technology enhanced reading contents over traditional courseware?

- How and what reading skills and sub skills are developed among the ESL learners through the implementation of TELL in pedagogical context?
- Are enough technological access provided to the learners to develop their reading skills with technology?

1.3 Methodologies of the Study:

The research methods implied for this study are-

- The researcher uses both primary and secondary research data in the study. That is, the researcher makes use of both library research data and the data collected through primary research for the study purpose.
- Teachers' and learners' subjective and objective responses from different higher secondary level schools of Bangladesh.
- Qualitative and Quantitative research method
- Conglomerated close and open ended question for survey purpose
- Classroom observation
- Discussion with "target group" i.e. the students and "resource group" i.e. the teachers (Brown, 1995).
- Use of pie diagram, percentage data, Likert's scale and tables to analyze the collected responses

1.4 Limitations of the Study:

It is to be noted that there are specified limitations of the current study. One of the major drawbacks of the study is that although the researcher wanted to include practical classroom teaching with technology as one of the instruments of the research, however, due to logistic

issues of the schools, the permission for such was not granted. Such modernized reading programs with varied technological implementations could have allowed the researchers to better conceptualize the participation of the learners in a technology enhanced reading atmosphere as compared to the traditional ones. Also, this would have given the learners an opportunity to re-check and concretize their attitudes and perceptions of TELL in ESL reading context. However, due to the limitation, the researcher had to base the study on the subjective and objective responses of the participants to the survey questionnaire along with participant observation of the pedagogical process. Furthermore, a comparison between a totalistic technologically enhanced reading classroom and that of a moderate one, alike those observed in majority of the government-operated schools in Bangladesh, could have provided the basis for a better comparative analysis between the performance, preferences and development of reading skills of the students in the two modes. However, despite attempts, the researcher could not find any government school that had such a totalistic and high frequency of technological implementation. As such, due to this limitation, the researcher had to base the comparative analysis of the frequency of technological implementations in promoting the learners' reading skills between the 3 government-based and 1 NGO-based higher secondary level school of Dhaka city.

Chapter 2: Literature Review

2.1. Defining TELL

According to the definition of Kirkwood and Linda (2014), Technology Enhanced Learning (TEL) refers to the use of information and communication technologies in the pedagogical teaching-learning process. This use of TEL gains a new dimension in the context of second and foreign language learning. According to Yang and Yi-Jun (2007), Technology Enhanced Language Learning (TELL) deals with the impact of technology on teaching and learning a foreign language. In ESL researches, TELL is emphasized for its pivotal impact to "assist and enhance language learning" and for being supportive of computer mediated communication (CMC) (Patel, 2014). Therefore, it can be asserted that Technology Enhanced Language Learning or TELL deals with the use and impact of technology on teaching and learning a second language or L2.

Yang and Yi-jun (2007) assert the use of TELL in pedagogical setting as bringing about added flexibility in the learning process, increasing the possibility to cater to individual learning styles of the learners, providing more in-depth language knowledge than those available in the traditional printed texts and for promoting a student-centered learning sphere. According to them, the TELL project played pivotal role to "improve students' knowledge of computers and other fields, develop their English abilities, expand their interests, and broaden learning range and possibilities" (p.860-79). As such, Jonassen(2000) reflects that through the facilitation provided by technology in learning sphere, students can now learn the second language in a meaningful way (as cited in Bratt & Janet,2007).

Furthermore, Patel (2014) asserts TELL activity as having goals and objectives which can play a part in learners' language development through integrating language skills and sub skills. He further notes the theoretical standing of TELL activity as reflecting two dimensions. Firstly, it highlights a theory of teaching and learning of the designer or the instructor. Secondly, it presents a theory of technology as-

- **Drillmaster:** *behaviorist*
- **Tutor:** *cognitive*
- **Tool:** *constructivist*
- **Mediator:** *socio-cultural*
- **Part of an ecology:** *socio-cognitive*

Therefore, TELL asserts an essential emphasis on the development and enhancement of L2 learning context and, thus, demands more study by ELT researchers to uncover its multiple fold in classroom processing.

2.2 The Growth of English Language Teaching and Learning through Technology:

It was noted by Warschauer and Caria (2000) that the style of language teaching has changed drastically over the years. They noted that every form of language teaching has had its own supporting technologies. For Grammar Translation Method (GTM), the technology of the blackboard and overhead projector encompassing a one-way transmission of information in a teacher-centered classroom was used. In the Audio-lingual era of 1970's and the 1980's, the audio labs gained prominence for practicing drills among learners. Pronunciation was more emphasized in the audio labs than actual communication. Finally, in the 1980s and 1990s, with a shift towards CLT, the use of modernized pedagogical technologies to assist the language learning needs of the learners in ESL context was introduced.

Now, in the 21st century's age of globalization, it is important to get a grasp on various foreign languages and specially, English for its international lingua franca status. At present the prominence of English language teaching and learning has increased with the increase of technological implications in pedagogic setting. As such, Graddol's study (2000) suggests that although in the year 2000 there were about a billion English learners, but a decade later the number have significantly doubled. The study also showed that over 80% of information stored on the internet is in English. Graddol reflects that "for the first time there are more Non-Native than Native users of the language and , thus, more diversity of context in terms of learners, age, nationality, learning background etc has become a defining characteristic of ELT today" (p.16).

With the rapid development of science and technology, there is an emergence of the application of multimedia in English language teaching. This sets a favorable platform for reformation and research on English language teaching and learning modes in the new era. Here, Patel (2014) asserts that technological innovations have "gone hand –in-hand with the growth of English and are changing the way in which we communicate" (p.117). This, in turn, is significantly revolutionizing the pedagogical teaching-learning atmosphere as well. Therefore, the growth of ESL and CLT with technologies has, nevertheless, opened up possibilities to new opportunities of language learning in the current prospectus.

2.3 Impact of TELL in Enhancing Learners' Reading Comprehension in ESL Context:

Reading is a fundamental skill for academic achievements and success. It is reflected in the study by Chapelle(2010) that modern technologies, in form of computers and mobile phones, has shown promise in language teaching and learning process. As such, it is currently observed that the use of computer is increasing in pedagogical process to develop the language skills and

proficiency of the learners. Likewise, mobile language learning (MALL) has also gained popularity in the past two decades. Use of these tools has been proved effective in EFL reading instructions as well (Sadeghi & Soleimani, 2015).

In order to understand why technology can enhance the reading comprehensibility of learners, Krashen's(1981) input hypothesis can provide valuable insight. According to this hypothesis, he asserted that any method can be conducive for language acquisition as long as it ensures comprehensible input in a low affective filter environment. This view is strengthened by brain research (Taj, Fatimah, Muhammad & Waqar,2017) which asserts that the retention of reading content is increased if it is received in a conducive learning atmosphere. Again, alike the aforementioned Krashen's(1981) theory, Repeated Reading (RR) technique put forward by Joshua Cohen (2011) and Free voluntary reading (FVR) or sustained silent reading(SSR) by Krashen (2011) has also been identified as the best approach to reading. In order to implement such reading strategies in pedagogical setting, the learners need to have access to diverse reading materials. It is important that they should be able to choose reading materials that interest them and that reading takes place in their Zone of Proximal Development (ZPD) (Vygotsky, 1978) to promote maximum language input or (i+1) as Krashen(1981) puts it. Internet and other technological implications can be immensely helpful in ensuring the process.

Again, schema theory approaches the problem of reading from another angle. Rydland, Aukrust, & Fulland (2012) asserts that during reading an interaction among reader, writer, the reading text and the reader's previously learnt knowledge takes place and this schema activation plays a decisive factor in the success of reading comprehension. As such, research shows that the learners' performance improved when materials related to their previous knowledge were presented to them (Boulware-Gooden, Carreker, Thornhill, & Joshi, 2007). Again, research by

Clark and Palvio(1991) showed eight times higher recall among students for vocabulary presented with pictures. The present study analyzes the perspective and opinions of the learners and their teachers in an attempt to evaluate whether technology assisted ESL reading environment can produce a conducive pedagogical atmosphere for development of such reading comprehension and skills as acclaimed by the aforementioned studies.

2.4 Role of Technology in Promoting Learners' Reading Comprehension in ESL Context:

Lindenau (1984) noted that we are all amidst of a "micro-electric revolution" and pointed that ignoring the arrival of such revolutions carries detrimental effects: "A blackboard and textbook system of education in the age of microelectronics will inevitably promote detrimental and far-reaching consequence" (p.119). Again, other researchers, for example Dunkel(1987), have argued that there could be a potential waste of resources if advantages of new technological tools are ignored in pedagogical context.

That is to say, technology has become so "normalized" (as cited in Motteram,2013, p.5) in the current pedagogical industry that their use has become unavoidable as they can change the environment of the classroom and allow the subject matter to become more accessible to the learners (Mishra & Koehler, 2006). As such, it has become indispensible for the language teachers to decide "how - and how not - to use technology in the classroom" (Morgan, 2008) in order to facilitate the enhancement of reading comprehensibility of the students. That is to say, the use of multimedia and technology in classroom helps the students to become increasingly familiar with academic language skills and proficiency development by means of incorporating authentic and varied texts. Here, Internet presents students with the opportunity to gather

information and introduces them to various materials for analyzing and interpreting the language and contexts to improvise their reading comprehensibility and skills.

Again, according to Motteram(2013), the teaching of reading, in the worst cases, can lead to children who are "able to decode, but are unable to comprehend or appreciate the full purpose of a piece of text" (p.34-5). This might happen when reading is "forced too early and becomes a purely mechanistic process, or if there are few engaging texts to interact with and where there is a lack of exposure to authentic oral models" (Ibid). According to Motteram, technologies give early readers the opportunity to practice reading in a low affective filter environment where the quality of feedback is constructive. This is also conducive to the creation of the aforementioned Vygotsky's "zone of proximal development" to ensure maximum reading comprehensibility. As Leung (2005) points out that reading must be purposeful and is a multi-layered, multi-modal process, thus, chosen texts for an ESL reading program should be engaging, relevant and explore a variety of genres in order to genuinely meet the needs of today's learners. Here, technology provides the basis for ensuring the appropriate text selection process and its enhanced application.

2.5 Types of Technologies Used for Improving Learners' Reading Comprehension in Language Classroom:

There are different types of technology which are used or can be used in language classroom to enhance the reading skill of the learners. Here, the selection of appropriate technology in class is essential for ensuring effective learning environment in which learners are considered as active participants and where collaboration and sharing of information in a resource-rich environment is a given precedence (Montrieux, Ruben, Tammy & Lieven, 2015).

According to Kranthi(2017), learning resources should have the following characteristics (p.30-2) :

- be activity-based rather than lecture-based
- draw students into group and co-operative learning, as well as provide opportunities for individual growth
- promote hands-on activities and an applied approach to learning
- encourage students to question, think, reflect and decide
- offer choice and flexibility, as appropriate
- to meet needs related to individual aptitudes, abilities, learning styles, multiple intelligences, and interests

Sewlyn(2010) divided the pedagogically implemented technologies into two orders-first order innovations and second order innovations (see Figure 1). He described the first order innovations as prevalent among many technology-rich learning environments and is implemented to create a "dramatically different educational climate" (as cited in Goff, 2013, p.5). The second order technologies are presented as "disruptive innovations appearing on the periphery of the educational landscape" and are just beginning to see their application in the pedagogical process (Ibid). These 'second order' innovations are slowly gaining attention and implementation in the field, and may be subjected to increased development and application over the next decade.

First-order innovations	Second-order innovations
blogs, wikis	augmented reality (AR)
social networking sites	simulations
virtual learning environments (VLE)	digital games
laptops, net books and tablet PCs	console games
interactive whiteboards	remote-response systems
Web apps	mobile/handheld
digital cameras, scanners, projectors e-Learning	computing programming applications
digital portfolios	pico projectors
	electronic books

Figure 1: Common and emerging innovations of technology-rich and enhanced learning environments (Goff, 2013, p.5-6).

Many of the above mentioned first-order innovations of the figure 1 falls under the category of Web 2.0 technologies—representing technological tools that brings forth the characteristics of collaboration, creativity, conversation, community and control (Hicks and Graber,2010). These technologies, for its high availability and convenient application, are conducive for promoting a technologically enhanced reading context.

Among such web 2.0 technology, Motteram (2013) notes some of the commonly featured ones. According to him, Wordle (www.wordle.net) is a good example of a web-based tool that can help "cement the interface between reading, writing and the significance of visual literacy in a 21st century world" (p.51-2). He notes that practitioners can use Wordle to help older children compare and analyze textual contents from varied genres and contexts. Furthermore, he reflects

that this digital texts and electronic books (e-books) can inspire children to read and can also record, measure or track reading progress of the readers.

Again, TextHelp's Fluency Tutor (www.texthelp.com/UK) is another sophisticated reading program that records a user's reading of a text and offers quick tests to measure the comprehensibility (Motteram, 2013). This enables a teacher to mark a learner's reading efforts online. The pupil can also review the comprehensive feedback provided by the teacher. The system tracks a user's achievements along the texts being read and presents progress through information charts. Other systems, like Pearson's Rapid Reading program (www.pearsonschoolsandfecolleges.co.uk/Primary/Literacy/AllLiteracyresources/RapidReading/ RapidReading. aspx), offer speech recognition and provide real-time feedback to a user as they read a text into a microphone connected to a computer (Ibid). It should be noted that the effectiveness of such reading programs lies within the appropriateness of the chosen texts and its proper implementation in the pedagogical context.

DGBL (Digital Game Based Learning) (Gros, 2007) and MALL (Mobile Assisted Language Learning) (Burston, 2013) has also been proved beneficial in improvising learners' language comprehension and skills in a technology assisted pedagogical setting. A related activity to DGBL, as noted by Motteram(2013), is interactive fiction (IF). It is a text-based digital game in which the readers participate in the storytelling process. Learners report IF as being particularly fun and engaging (Pereira, 2012) as users have control over the plot and gets to solve puzzles along the way. Thus, such web 2.0 technologies along with other commonly used technological applications, like the internet, projectors, and computers etc., are constantly producing new possibilities for promoting reading comprehensibility of the learners in a pedagogically assisted language environment.

2.6 Role of Learners in Improving Language Reading Skills in Multimedia Classroom:

The mode of education in this 21st century has been witnessed with a paradigm shift from traditional teaching environment to a more technology-based learning environment. This, in turn, has influenced the development of education. For example, interactive multimedia learning applications, blended learning and distance learning which involve web-based learning are gaining prominence in the pedagogical context at present (Motteram,2013). With these new applications and learning platform, students are exposed to a more student-centered learning experience where the main purpose is to promote autonomous learning (Chik, 2014). Thus, in such modernized technologically enhanced pedagogical context, development of learners' reading comprehensibility is as much an individual learner's responsibility as that of the teacher's.

According to Shyamlee and M. Phil (2012), the use of technology in education is necessary because students are known as "digital natives" (p.151). Students nowadays are highly connected with technology and use it to search for information to assist their learning. Social networking tools and chatting softwares have provided the basis to enhance the learners' communicative abilities in out-of-classroom sphere. Therefore, it is necessary to use technology in education to enhance students' learning experiences. In such technology-assisted autonomous learning environment, learners can, thus, enhance their reading comprehensibility with the help of modernized reading technologies. Using such learner-friendly multimedia in pedagogical context can also help to promote deeper learning. This can have a positive impact in creating a learner-centered pedagogical environment. Multimedia learning enhances reading comprehensibility as through the use of technology learners are "able to gain better attention from learners, achieve higher retention rate and also encourage better participation rate among

learners" (Ibid, p.157-8). Once students are attracted to the multimedia classes, they are motivated to continue exploring the technological applications in reading contexts, thus, resulting in self-improvement of the learner's reading comprehensibility.

In University of Texas in USA, three teachers conducted a study on using multimedia enhanced problem-based learning to teach Science. The study has shown that this learning environment is interesting and students are motivated to learn Science (as cited in Shyamlee & M. Phil, 2012). In the same way, technology can enhance the reading skill and experience of the learners and make the language classroom a more relatable and interesting one.

2.7 Necessity of Using Technology for Increasing Learners' Reading Comprehensibility:

Communicative learning method has been introduced in the national curriculum up to college level, i.e. class XI-XII. Without having a strong background in English language it has, thus, become difficult for students to perform well in higher educational context, whether in college or in university. Therefore, use of technology in language classroom at a higher secondary level can help the learners to get an early acquaintance with the technological implementation in language learning and make them better prepared for the later education levels of college and university. Ivy (2011), thus, asserts that it's pivotal to implement technology, whether for official or classroom purposes, in pedagogical setting to promote the language learning process. Shyamlee and M. Phil (2013) discussed the necessity of multimedia in CLT classroom for the following purposes (p.150 – 55):

¬ To cultivate students' interest in study

¬ To promote students' communication capacity

¬ To widen students' knowledge to gain an insightful understanding of western culture

--- To improve teaching effect

¬ To improve interaction between teacher and student

They further note that with such features as "abundant-information and crossing time and space" (Ibid), multimedia technology offers a sense of readability and practicality which triggers the students' interest and motivation in study and their involvement in the language reading process. This also provides the students greater incentives to participate in the pedagogical processing. So, multimedia teaching can uniquely inspire students' creative thinking and communication skills and allude them a cultural understanding of the western world as well. The multimedia can offer information, more abundant than the printed course texts. This can provide them reading texts with vivid cultural backgrounds, rich contents and relatable language materials. The varied information obtained through various channels can further equip the students with knowledge, promote information-sharing among students and make them actively participate in class discussion and communication sphere. This, in turn, promotes the individualized and co-operative learning.

Vaičiūnienė and Daiva(2010) points out that through multimedia technology the students get rich sources of authentic learning materials and get "the authenticity of the learning process" as technology helps create the simulation of real-life situations (p.96). Therefore, Shyamlee and M. Phil (2012) also notes that technology goes "beyond time and space, creates more vivid, visual, authentic environment for English learning, stimulates students' initiatives and economizes class time" (p.156-7). Thus, when using multimedia software, teachers can use pictures and images to enrich the content of courseware and students in the class can use

multimedia to understand the class and the texts in a clear way. Thus, it is apparent that using TELL in ELT is effective in nurturing students' interest in reading English contents in a contextualized way.

This technological intervention, in turn, can bring about revolutionary impact in facilitating the learning process, and thereby, enhancing the reading skills of the learners. It can help dispensation of knowledge over great distances while subsiding the issues related to infrastructure and that of socio-religious traditions (Mishra and Koehler, 2006). Thus, if used innovatively, TELL has the promise of changing the very way people learn.

2.8 Benefits of the Incorporation of Technology in ESL Reading classrooms:

Several researchers have performed studies in an attempt to find out the positive impacts of the incorporation of technology into the classroom settings (Dawson, Cavanaugh & Ritzhaupt, 2008). For the most part, the findings show a positive result of the creation of a student-centered learning atmosphere where the student is made responsible for improving his or her learning. Here, Software and hardware become tools to promote the autonomous learning, and, thus, reading process among the learners. All of these factors create an increase in students' interest and engagement with the reading contents which results in an increase in their reading comprehensibility along with other language skills.

Thus, in a TELL classroom, the teacher takes the role of a facilitator. Teachers guide the critical thinking skills and the use of the computer among the learners. They make practical choices of tools and media that will help guide the learners and the learning process (Drayton, Falk, Hobbs, Hammerman, & Stroud, 2010) and, thus, aid the language skill development steps of the learners.

Another positive side of the use of technology in the classroom is the increase in collaboration among teachers and students. This interaction is manifested through the trading of information and tips regarding computer skills and technology. Thus, learners are no longer the passive recipients of knowledge. Rather, they are alleviated to the part of co-learners or assistants in the teaching-learning process. Study showed that teachers report the introduction of technological applications encourages student-directed learning and the acquisition of responsible and self-reliant behaviors by the students (Ibid). Thus, the learners, in a technology assisted language environment become active readers and are constantly engaged in utilizing technological applications to enhance their reading skills.

Computer-based classrooms also increase students' motivation. Research data by Mouza(2008) demonstrates that students in classrooms with laptops are naturally more enthusiastic about the learning process than students who do not have laptops in their classes (as cited in Sabzian, Abbas & Sedigah,2013). This increase in motivation, in turn, leads to the participation in language activities that aims at developing language and technological skills of the learners. Thus, a sense of confidence is built up among the learners.

Technology also showed positive impacts in increasing the learners' language performances in examinations. Research projects that when students are engaged in technology-immersed classrooms, there is a gain in achievement in all subject prospectuses (Wenglinksy, 1998 & Means, 2010). Wenglinksy (1998) came to this conclusion that using computers in mathematics among eighth graders were significantly related to academic achievement of the school. Again, Shapely, Maloney, and Caranikas-Walker (2010) report on an extensive study performed on 21 schools. The purpose of the research was to evaluate technology immersion in these middle schools and its effect on test scores. The longitudinal data was collected for four

years. It was thereby noted that the use of technology in the classroom correlated with test scores.. As such, schools that implemented the program first enabled their students to reach higher test scores. The research acknowledges that positive attitude towards the utilization of technology in classrooms is directly proportional to greater language proficiency among the learners. However, Means (2010) cautioned that technology alone is not a cure for poor scores. She reports on a research project on 13 schools that found out that element of technology, like reliable educational tools, main support, and pleasing onsite technical backups, can affect student scores.

Again, two other research by J. A. Kulik (2003) and Taylor (2006) based on twenty-seven and eighteen studies on the role of technology in pedagogical context respectively, also reported positive findings in favor of the use of technology. Similar positive gains were reported by Ponce, Lopez, and Mayer (2012) and Behjat, Yamini, and Bagheri (2012) when a computer program for reading comprehension instruction was used as a part of the curriculum. In the researches, the reading texts were coupled with graphics and highlighting and its impact on promoting reading comprehension among learners were found to be positive because of its ability to present text in multimodal ways.

Again, computer-assisted cloze practice was also reported to promote reading comprehension (Tabatabaei, 2012). It has also been found beneficial in silent reading approach (Cohen, 2011) and in both intensive and extensive reading approaches (Lin, 2014). However, the shift from paper reading to screen reading also has been a concern among the educators. Numerous studies were conducted to evaluate how reading from screen might affect reading comprehension. There seems to be a proposition that it makes no difference to reading comprehension whether readers read on paper or on screen (Wright, April & Francine, 2013).

Thus, all the aforementioned findings favor digital reading in a direct or indirect way. This is because the digital texts can be presented with multiple annotations which are easily accessible. This diverse feature of digital texts gives it an immense advantage over paper texts and traditional language reading programs.

2.9 Limitations of Using Technology in Language Classroom:

There are many problems arising from the application of multimedia technology to English language reading programs despite its advantages. If totally dependent on multimedia during teaching, it can turn into a dominating factor rather than a facilitating one in the pedagogical sphere. Shyamlee and M. Phil (2012) notes that although a lot of teachers are active in technological application in pedagogical practice, however, they are not proficient enough to handle it confidently. Thus, in class, they tend to stand by the computer while students are fixing their attention only on the screen. As such, there is no eye contact between teachers and students and, this, results in a lack of communication between the pedagogical participants. There is the replacement of teachers' voice by mechanical sound, and teachers' analysis by visual image. It leaves the students with few chances for communication and active participation.

Language teaching and learning is conducted in a communicative atmosphere in which the teachers raise impromptu and real-time questions and, this, guides the students to think, to discover and to solve problems. However, Shyamlee and M. Phil (2011) notes that due to pre-arranged order, the courseware lacks "real-time effect and cannot give feedback" (p.156). Thus, use of TELL may have the drawback of ignoring the importance of language teaching and also neglecting the cultivation of students' thinking and contemplating capabilities in the language.

Again, at present, the decreased students' reading competence has become a major concern for reason that textual words are replaced by sound and image and handwriting by keyboard input (Ibid, p.156-7). All in all, the multimedia as an assisting instrument, cannot replace the dominant role of teachers and it is part of a complete teaching-learning process. So the purpose of TELL is not to dominate the pedagogical process, but to integrates the visual and textual demonstration with teachers' and learners' experience to contribute to the spontaneous learning process so as to enhance the overall improvement of students' listening, speaking, reading and writing skills along with overall language comprehensibility.

2.10 The Effectiveness of Using Technology in English Language and Reading Classrooms in Higher Secondary level Schools in Bangladesh:

The aforementioned studies on the benefit of implementation of TELL in pedagogical setting indicates a pattern of positive effects. As such, Hennessy, Rosemary and Kenneth (2005) noted that the ICTs could act as a catalyst in stimulating the teachers and pupils to work in new ways. This could promote teacher-pupil and peer discussion, exploration, analysis and feedback in the pedagogical process. Warschauer (2000) described two distinct perspectives about the process to integrate technology into the classroom. In the first perspective, the learners get the opportunity to maximize their language exposure in a meaningful context and construct their own individual knowledge. Here, Warschauer notes that multimedia simulation software allows the learners to receive such exposure in a meaningful audio-visual context. For the second perception, the social approach to language learning is emphasized. In this perspective, students are to be given opportunities to practice authentic social interactions in the language to develop the real-life language skills. The integration of such authentic real-life texts not only helps to contextualize the reading contents but also gives the learners the opportunity to select reading

texts that best suits their interest. Thus, this promotes autonomous reading among learners in the pedagogical context.

A practical implication of this is noted in Save the Children's research in Bangladeshi ESL context (Parvin & Shaikh, 2015). Here, Save the Children introduced technology in some primary school classrooms in Bangladesh with the hope of improving language teaching and learning practices. To determine the effects of technological implementation in primary schools, Save the Children conducted this research. 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 through reading texts in mobile technology due to its easy accessibility to most of the learners. The subjective opinion of the learners reflected that they found reading online contents through mobile technology more interesting and motivating.

However, the research also noted that psychological factors among participants can lead to negative results with the use of ICT in learning. UNESCO (2012) study shows that sometimes students prefer interacting with physical teaching materials rather than digital ones. The teachers needed to pay close attention to students' responses and balance these with traditional teaching. Again, insufficient teacher training and practice in the use of technology can also posit a problem at times. Other problems were also noted. In UNESCO's researched pilot schools, there was only one laptop available and even that was not utilized properly in the pedagogical teaching-learning process. Among the project teachers, only three had personal computers. There were logistic issues of maintenance and troubleshooting as well. As such, in the study, a need was identified to create a management system to provide technical support in the multimedia pedagogical process.

The drawbacks that are reflected in the aforementioned research cannot be overlooked in the ESL context of Bangladesh. It is to be established that without thorough understanding of the technology at hand it will be impossible to bring out optimum result (Ivy, 2011). Therefore, it is essential that Teachers should be aware of the possible frustration resulting from the unfamiliarity with computer software among students and themselves. They should also be aware of the problems of different software as this demonstrates a major challenge in technology enhanced ESL contexts. Again, issues of budget is another concern in the implementation of TELL in the ESL context of Bangladesh. Ivy (2011) stated, "It is not always possible to fund language programs with such high cost, especially in the developing countries." Therefore, such technological implementations remain a "distant dream" to most teachers in the country (p.217). Moreover, in a country like Bangladesh, not all students have sufficient access to technologies at home and, as a result, they cannot do online based homework or make the best use of digital online resources in out-of-class sphere to improvise their reading comprehensibility. As such, in the ESL context of Bangladesh, developing learners' reading skills and comprehension with technological implications can be a challenging task.

Chapter 3: Research Method

This chapter explains the methodology of the study to identify the students' preference in technological input that best supports the development of their reading comprehensibility. The research hypothesis will be mentioned in the background section. The other parts will describe the research objective, the importance of the study, participants of the research and the research instruments used for data collection and the methods of analysis of the study. The survey questionnaires were distributed to the students and their teachers of junior section of three Bangla Medium schools and 1 English Version school of Bangladesh to find adequate information for the research. These schools are-

(1) Banani Model High School

(2) Banani Bidyaniketan

(3) Banani T&T Girl's School

(4) JAAGO School, Rayer Bazar Branch

3.1 Background Information of the Research Process:

As Brown manifests that "Questionnaires are more appropriate for gathering information on large scale" (1995, p. 50) and as questionnaire are an essential tool to draw out information from the participants (p. 45), the questionnaire has been adopted as the main instrument in the survey. Questionnaire manifests an efficient way to collect information from a large number of research participants in a short span of time. It also alludes the collected data a basis for reliability and makes it convenient for quantitative analysis. Here, for the convenience of collecting data among Bangla Medium students, the researcher included statements and questions in the survey with both English and Bengali translation.

3.2 Research Objective:

The objective of the research is to identify the technological implications that will best help to enhance the reading comprehensibility of the learners' in the context of Bangladesh based on perception of learners themselves and their teachers. The research also seeks to find out the attitude and perceptions of the learners and the teachers regarding the limitations of TELL in ESL reading context

3.3 Importance of the Study

This study will give an idea on the students' and teachers' perceptions on implementing TELL in ESL reading context. The study will document their attitude towards using technology to develop specified reading skills and sub skills, their technological preferences along with other subjective opinions regarding its benefits, purpose, problems etc. As such, the study will highlight not only the perceptions of the participants on the impact of TELL in aiding the learning process, but also its impact on enhancing the ESL reading process. The study is important and unique as it is the first research that specifically evaluates the implementation of TELL in promoting the academic reading skills and sub skills among learners in the ESL context of Bangladesh.

3.4 Participants and Settings of the Research:

For the purpose of this study the researcher selected 3 Higher Secondary Level Bangla Medium government schools and 1 NGO-based Higher Secondary Level English Version school. The researcher selected this institution based on the knowledge that they make use of multimedia classes in teaching English grammar and language to the learners. Again, as the research is based on higher secondary level ESL learners, therefore, the researcher distributed the questionnaire

among learners of grade VIII, IX or X of the schools. Here, the learners manifest the "target group" of the research study (Brown, 1995). The participants of this research were in total two hundred and one students from three reputed Bangla Medium schools and 1 English Version school in Bangladesh. The subjects were randomly chosen from-

(5) Banani Model High School(60)

(6) Banani Bidyaniketan(55)

(7) Banani T&T Girl's School(50)

(8) JAAGO School, Rayer Bazar Branch(36)

Furthermore, the perceptions of the teachers were also collected on the impact of technology in promoting learners' reading comprehensibility. Here, the teachers manifest the "resource group" (Ibid) of the study from whom information about the target group is collected. The teachers were randomly chosen from-

(1) Banani Model High School(1)

(2) Banani Bidyaniketan(2)

(3) Banani T&T Girl's School(2)

(4) JAAGO School, Rayer Bazar Branch(3)

3.5 Nature of the Research

3.5.1 Primary Research

The research is a primary research. According to Driscoll(2011), primary researches are those which are collected firsthand rather than found from a book, database, or journal. He further manifests that in such primary research the researcher makes use of scientific method,

develops research questions and collects data that is "measurable, observable, and replicable" (p.154). According to him, the ultimate goal of primary research is to "learn about something new that can be confirmed by others and to eliminate our own biases in the process" (Ibid). As such, to find out the impact of TELL in ESL reading context of Bangladesh, the researcher focuses his study on the 3 government-based Bangla Medium and 1 NGO-based English Version school of the country.

3.5.2 Quantitative Research

This study also makes use of quantitative research methodology. A research that makes use of descriptive research method, correlation, developmental design, observational studies, and survey research is known as quantitative research method (Williams, 2007, p.67). In this study, close ended questions have been used and the analysis includes calculating them based on the Likert's scale and measurement index (Bonne & Deborah, 2012).

3.5.3 Qualitative Research

The study also makes use of qualitative research method by dint of using observation and discussion with focus group as crucial research instruments. According to Greenhalgh and Rod(1997),qualitative research are used by researchers to make "sense of, or interpret phenomena in terms of the meaning people bring to them" (p.740-43). As such, to incorporate the subjective opinions and viewpoint of the participants of the research, the researcher makes use of qualitative data collection process along with the aforementioned quantitative ones.

3.6 Research Design

3.6.1 Data Collection Procedure

The research was done in the three Bangla Medium schools and 1 English Version school of Bangladesh. At first, the researcher took permission from the authorities of those schools. Then survey questionnaires were distributed among the randomly selected students and teachers of Higher Secondary sections of those schools and were asked to give a tick to the suitable option based on their belief and experience on the topic. For the discussion session, the interview with the teachers in each of the schools was conducted before the survey and those with the students were conducted afterwards. The researcher also took permission for observing a multimedia language classroom in each of the schools. The classroom observation was conducted on a separate day after the survey.

3.6.2 Research Instruments for Data Collection

In this study the researcher collected information on the topic through questionnaire, observation and discussion with "target" and "resource" group.

3.6.2.1 Quantitative Data Phase: Survey Questionnaires

According to Bulmer (2004), the questionnaire is a tool for "acquiring information on participant social characteristics, ;behavior or attitudes and their beliefs and reasons for action with respect to the topic under investigation" (as cited in Bird, 2009, p.1307). Again, Mackey and Gass (2005) states that the survey as a questionnaire is "one of the most common methods of collecting data on attitudes and opinions from a large number group of participants" (p.92). As such, it provides the basis to explore and collect a wide variety of questions in second language

research. By using questionnaires the researcher can elicit information which respondents are able to report about themselves, such as their beliefs, motivations and preferences.

In this research, at first, the researcher has selected a survey questionnaire consisting of 22 close and open ended questions (Hyman & Jeremy, 2016) to collect the participants' attitude, preferences and opinion on their preferred technological implication for facilitating the reading skills and comprehensions of the learners. In the closed-ended question, respondents were given a set of responses to select from and could not give any subjective opinion. On the other hand, the open ended questions serve as a basis for the participants to provide their free opinions and viewpoints. Here, Erickson & Kaplan (2000) notes that through combining closed-ended and open-ended items a form of mixed methods research is formed that has gained popularity due to its potential to capture the benefits of both quantitative and qualitative data collection and for providing the basis for a cost effective data analysis mode for the researcher (as cited in Vitale, Achilles A. & Hubert S., 2008). As such, the researcher makes use of this conglomerated questionnaire mode to collect the perceptions of the participants of the research.

3.6.2.2 Qualitative Data Phase 1: Interview Session with "Target" and "Resource" Group

Focus group interviews are a qualitative data collection technique. It can be either with the facilitators or the learners in the pedagogical process. In the current research, discussion session with both the target groups i.e. the students, and the resource group i.e. the teachers, were held in each of the schools. It generally includes unstructured interviews and replicates a natural conversation among the researcher and the participants. Dilshad and Muhammad(2013) asserts that such interview sessions provide "a setting for the relatively homogeneous group to reflect on the questions asked by the interview" and is crucial for collecting qualitative data (p.191-93).

The discussion with the resource group was held before the beginning of the survey session and that with the target group were held after the session in each of the schools. The time scale of each session ranged between 5-10 minutes.

3.6.2.3 Qualitative Data Phase 2: Observation of Multimedia Classes

According to Jamshed (2014), observation as a type of qualitative research method "not only included participant's observation, but also covered ethnography and research work in the field." He further asserts that the observational data can be integrated as auxiliary or confirmatory research (p.87-8). Here, observation gives the researcher an opportunity to experience the research field from a frontline position. Observation is very important in ESL context as the researcher gets in-depth information about activities, interactions and events that take place in a second language classroom. Again, observation, if properly conducted, can prove to be just as much effective as surveys as it provides the opportunity to collect "large amount of rich data on the participants' behavior and actions within a particular context" (Mackey and Gass, 2005, p. 175-176). For the purpose of this study, the researcher, having obtained permission from the college authority, observed a total of 4 English language multimedia classrooms; one from each of the schools that participated in the survey process.

3.6.3 Methods of Analysis

To collect data for this research the researcher has chosen both quantitative and qualitative method. The data collected from the close ended questions was entered into spreadsheet and then collected raw data were analyzed by Microsoft Excel 2007. Finally, the means value of the data was arranged in the Likert's indicator tables and analyzed in the discussion portion. However, the response of the Banani Model High School's teacher to the

survey questionnaire has not been subjected to any mean calculation as only one teacher participated in the survey process from the school. As such, the data of the particular teacher's response has been presented as it is. Again, the qualitative data collected from the observation and discussion sessions were also subjected to analysis to better validate the quantitative data. The researcher focused on the following issues in analyzing the data:

3.6.3.1 Quantitative Data Phase: Survey Questionnaires

The quantitative data from the survey questionnaire responses deals with the following aspects:

- Learners' and teachers' attitude towards implementation of TELL in ESL reading context
- Learners' and teachers' perceptions of the preferred technological mode that best develops learners' reading comprehension
- Respondents' outlook on the development of learners' reading skills and sub skills (like-skimming, scanning etc.) with the use of technology.
- Subjective opinions regarding the outcome of technology enhanced reading classes over traditional ones on the development of learners' reading skills and comprehension.
- Limitations that the learners encounter in multimedia assisted reading classes

3.6.3.2 Qualitative Data Phase 1: Interview Session with "Target" and "Resource" Group

The researcher, while engaged in the interview session with the pedagogical participants, directed the flow of the free conversation in a specified direction to unravel the following information through the conversation:

- The learners' preferred technological modes, both in and outside pedagogical context, in improvising their reading skills
- The specified reading skills and sub skills(skimming, looking up details etc) that the learners practice in multimedia classes
- The limitations that the learners face with such multimedia enhanced reading classes
- Subjective opinions and suggestions regarding how the implementation of TELL in ESL reading context can be improvised.

3.6.3.3 Qualitative Data Phase 2: Observation of Multimedia Classes

While observing the multimedia classes in each of the schools, the researcher specifically observed and collected information on the following aspects:

- The forms of technology assisted reading inputs being provided to the learners
- The participation and responses of the students in a multimedia assisted reading classroom
- Observed limitations of the multimedia reading classes (logistic issues, decreased students' participation etc.)
- The reading skills that is exercised or learnt by the learners in a multimedia enhanced reading classroom.

Chapter Four: Findings

This chapter contains findings and interpretation on the data collected through questionnaire and information obtained through observation and interview session with the "target" and "resource" group.

4.1 Analysis of the Questionnaire

4.1.1 Analysis of Items (Statements and Questions) of the Survey

. A total of 22 questions have been incorporated in the survey questionnaire. Among them, the first 18 statement questionnaires are close ended. The close ended questionnaire were based on Rosset's(1982) framework and included attitude, preference, problem identification and learner skill-focused questionnaires.(as cited in Brown,1995). Statement no. 1-8 evaluated the attitude of the learners' towards technological implications in ESL reading contexts.. Similarly, statement no. 9-12 evaluated their perceptions of technological use in promoting learners' reading comprehensibility and skills. Again, Statement 13-18 evaluated the learners' preference for specific technological modes (like- mobile apps, reading games, online exercise etc.) in pedagogical contexts for improvising their readings skills. The responses to each of these questions were subjected to mean calculation and arranged on the Likert's measurement Index.

Question no. 19 of the survey was a conglomeration of both close and open ended questionnaires. In the questions, the survey participants had to choose from the different given options of technologies which they prefer to use in pedagogical reading contexts. However, the question attains its open ended status as it provided a designated space to incorporate any other forms of preferred technological modes that was not mentioned in the given options.

Again, question no. 20-22 of the survey are entirely open ended that require subjective responses from the participants. In question no. 20, the respondents were to place their subjective opinions on the benefits of technologies in enhancing the learners reading comprehensibility and skills in pedagogical setting. Again, in question no. 21, the subjective students' and teachers' views about the outcome of technology enhanced reading modes over traditional ones in promoting the learners' reading comprehensibility in English was to be evaluated. Finally, in question no. 22, the respondents were asked to describe about the possible limitations and hindrances that the learners encountered in multimedia assisted ESL reading classes and their subjective suggestions to overcome the limitations.

4.1.2 Data Calculation and Interpretation

For the purpose of this study the researcher has calculated the responses to the questionnaires of the survey and interpreted the findings under the following sub-headings:

4.1.2.1 Attitude towards TELL in ESL Reading Context:

The statement no. 1-8 of the survey questionnaire asserted the impact of technology in increasing learners' comprehensibility, motivation and interest in ESL reading context. The questionnaire required participant teachers and students to tick one of the 5 given options from Likert's scaling that best suits their individual attitude towards the statements. Here, the interpretation key of learners' response in the specified question part is as follows: 1-1.80= they completely disagree with the statements, thus, highlighting the negative attitude towards technological implementation in ESL reading classes, 1.81-2.60=they somewhat disagree, 2.61-3.40=they have a neutral attitude towards the implementation of technology in ESL reading context, 3.41-4.20= implies the belief that they somewhat agree with the statements on the

positive impact of technology in multimedia reading spheres and 4.21-5= they completely agree with the statements.

No	Statements of Questionnaire	Banani Bidyaniketan (60)	T&T Girl's High School(55)	Banani Model High School(50)	JAAGO School (36)
1	I think using contents from internet(web pages, e-books etc) is more helpful in increasing my reading comprehension than the ones from existing course books and notes	4.5	4.22	4.43	4.30
2	I find/ think reading texts from a wide range of technological sources (Websites, online journals) etc. is more interesting than those in the course materials.	4.7	4..27	4	4.5
3	I think I will be more motivated to read varied reading contents available in technological medium (Journals, texts, articles) rather than those in the provided course materials.	4.77	3..090	3.2	4.63
4	I think there should be more	4.67	3.54	3.68	4.44

	reliance on technological sources (Web page, internet) for providing varied reading texts in the classroom				
5	I think reading contents in the internet (Wikipedia, online news journal) is more interesting than those in the existing course book.	4.56	3.07	3.2	4.69
6	I am comfortable with using technology along with the existing course materials to improve my English reading skills	4.58	4.45	4.34	4.83
7	I think the teacher should provide us more access to internet and other technological sources in the classroom to improve our reading skills.	4.25	3.090	3.74	4.71
8	I don't think technology is required for improving my reading skills as the existing course materials are sufficient	1.36	1.85	1.2	1.22

Table 4.1.2.1 (a): Mean calculation of the learners' response on the attitude based statement questionnaires.

Thus, it appears from the above presented scaling that the collected response mean for statement no.1-7 of the questionnaire ranges within the Likert's scaling of 3.41-4.21 and 4.21-5, thus, implying that most of the learners from the four schools actually have a positive attitude towards the implementation of technology in ESL reading context. Again, a more thorough evaluation reveals that the scaling for positive attitude towards technological implementation is significantly higher in Banani Bidyaniketan and JAAGO School's students' response mean with all 7 statement responses of JAAGO school's learners ranging within the scale of 4.32-5 and 5 of Banani Bidyaniketan's within the same scale and 2 within the neutral domain. This is higher than Banani T&T Girl's School and Banani Model High school's learners' response mean as from both schools only 3 statement response were within the scale of 4.32-5 and 1 within the scaling of 3.41-4.21, which implies complete or somewhat positive attitude towards technological implementation, and the rest within the range of 2.61-3.40, i.e. within the neutral scaling point. However, in question no. 8, the mean calculation of 3 schools i.e. Banani Bidyaniketan, JAAGO school and Banani Model High school ranged within 1-1.81 scaling and that of Banani T&T Girl's school within the range of 1.81-2.60, implying that they completely disagree and somewhat disagree with the aspect that technology is not required alongside existing course materials to improvise their English reading comprehensibility respectively.

Furthermore, the teachers' response to the statements when calculated along the same scale provides the following data-

No	Statements of Questionnaire	Banani Bidyaniketan (2)	T&T Girl's High School(2)	Banani Model High School(1)	JAAGO School (3)
1	I think using contents from internet(web pages, e-books etc) is more helpful in increasing my students' reading comprehension than the ones from existing course books and notes	4.5	4	4	4.67
2	I think reading texts from a wide range of technological sources (Websites, online journals) etc. is more interesting to my students than those in the course materials.	4	3.5	4	4.33
3	I think my students will be more motivated to read varied reading contents available in technological medium (Journals, texts, articles) rather than those in the provided course materials.	3.5	3.5	5	5

4	I think there should be more reliance on technological sources (Web page, internet) for providing varied reading texts to the students in the classroom	3.5	3.5	3	4.33
5	I think reading contents in the internet (Wikipedia, online news journal) is more interesting to my students than those in the existing course book.	3.5	3.5	4	4
6	;My students are comfortable with using technology along with the existing course materials to improve their reading skills	5	4.5	5	5
7	I think the institution should provide the students more access to internet and other technological sources in the classroom to improve their reading skills.	4.5	4.5	4	5

8	I don't think technology is required for improving my students' reading skills as the existing course materials are sufficient	1.5	2.5	1	1

Table 4.1.2.1 (b): Mean calculation of the teachers' response on the attitude based statement questionnaires.

Thus, according to the Likert's scaling, it can be asserted that in case of statement no 1-3,6 and 8, the opinion of all the teachers' from the schools delved within the mean range of 4.21-5, thus , asserting that technology, according to their perception, indeed have a positive impact in enhancing motivation and interest among the learners' in ESL reading context and also shows their own positive attitude towards technological implementation in language classrooms. However, in statement no.4, although the mean range of Banani Bidyaniketan, T&T Girl's School and JAAGO school's teachers' responses ranged within 3.41-4.20 and 4.21 -5 , asserting the fact that technological reliance in enhancing learners' reading comprehensibility should be increased, however, Banani Model High School's teacher's response alluded a neutral scaling of 3 in this case. Again, in case of statement no. 5, all the school teachers' response mean delved with the scaling of 3.31-4.32, asserting that they had a neutral position on the statement that contents in the internet are more interesting than the provided course materials. Again, in case of statement no. 8, the teachers' response mean of Banani Bidyaniketan, Banani Model high and JAAGO school being within the range of 1-1.81, asserted that they completely disagree with the statement that technology is not required alongside existing course material to enhance the

learners' reading comprehensibility. For T&T Girl's High school's teachers' response mean, the range was within 1.81-2.60 which reflected that they "somewhat disagree" with the statement.

4.1.2.2 Impact of TELL in Enhancing Learners' Reading Skills and Sub Skills:

The statement no. 9-12 of the questionnaire asserted the impact of technology in increasing learners' reading skills and sub skills. The questionnaire required participant teachers and students to tick one of the 5 given options from Likert's scaling that best suits their individual attitude towards the statements. Here, the interpretation key of learners' response in the specified question part is as follows: 1-1.81= they completely disagree with the statements highlighting the negative impact of technology in increasing learners' reading skills and sub skills, 1.82-2.60=they somewhat disagree with the statements, 2.61-3.40=they have a neutral attitude towards the implementation of technology in enhancing learners' English reading skills and sub skills, 3.41-4.20= implies the belief that they somewhat agree with the statements on the positive I;mpact of technology in increasing learners' reading abilities and 4.21-5= implies that they completely agree with the statements.

No	Statements of Questionnaire	Banani Bidyaniketan (60)	T&T Girl's High School(55)	Banani Model High School(50)	JAAGO School(36)
9	I can scan/look for key information(keywords, vocabularies, numbers etc) more easily in technology assisted reading texts than	3.53	3.36	3.1	4.22

	the printed course book.				
10	I can catch the main gist (theme, structure, genre etc) of a reading passage more easily in a technologically assisted reading passage than the printed course material.	3.46	3.33	3.06	4.61
11	I can look up details in an online reading passage more easily than the printed text.	4.21	3.29	2.63	4.89
12	I think my reading comprehensibility is enhanced if the reading passage comes with an audio, picture or motion video.	4.78	4.6	4	4.58

Table 4.1.2.2 (a): Mean calculation of the learners' response on the language skill focused statement questionnaires.

In the above Likert's scaling it is observed that the learners' response mean for Banani T&T Girl's school and Banani Model High delved within the range of 2.60-3.41 for statement no.9, 10 and 11, thus, asserting that they hold a neutral position on the aspect that they can scan for information, capture the main gist and look for details more easily on technology assisted

reading texts available in internet rather than the existing course material. However, the response of Banani Bidyaniketan's and JAAGO school's learners on the statement no. 8 and 9 of the same questionnaire ranged within the mean of 3.41-4.20 or 4.21-5, reflecting that they somewhat agree or completely agree that technology-enhanced reading mode is better for scanning and capturing the main gist than existing course material. Again, although JAAGO school learners' response for statement no. 10 delves within the range of 4.21-5, that is showing the learners' complete positive attitude on the aspect that they can look up details more easily on technology-enhanced reading source, however, that of T&T Girl's School's learners' response mean ranges within the same group as Banani Bidyaniketan and Banana Model High. Furthermore, on statement no.12, as the mean response of all the schools' learners' ranges within the Likert's group of 4.31-5, thus, it reflects that all the students agree on the issue that their reading comprehensibility is enhanced if the reading passage is assisted by audio-visual technological medium.

Furthermore, the teachers' response when calculated along the same scale provides the following data-

No	Statements of Questionnaire	Banani Bidyaniketan(2)	T&T Girl's High School(2)	Banani Model High School(1)	JAAGO School(3)
9	My students can scan/look for key information (keywords, vocabularies, numbers etc) more easily in	3.5	3.5	3	3.67

	technology assisted reading texts than the printed course book.				
10	My students can catch the main gist (theme, structure, genre etc) of a reading passage more easily in a technologically assisted reading passage than the printed course material.	3.5	3.5	3	4
11	My students can look up details in an online reading passage more easily than the printed text.	3.5	3	3	4.33
12	I think my students' reading comprehension is enhanced if the reading passage comes with an audio, picture or motion video.	4.5	5	5	5

Table 4.1.2.2 (b): Mean calculation of the teachers' response on the language skill focused statement questionnaires.

Surprisingly, contrary to the learners' response on language skill and sub skill statements, the teachers' response presents a slightly different perception. In case of statement no. 9-11, presenting the positive impact of technology in enhancing learners' scanning, skimming and other reading sub skills, the teachers' response mean of Banana Bidyaniketan and T&T Girl's School delves within the range of 3.40-4.20, i.e. asserting a somewhat agreeable position and that of Banana Model High School ranges within 2.31-3.21, i.e. holding a neutral position on the statement. Here, on the statements, only the response of JAAGO school's teachers' mean delves within the range 3.41-4.20 on statement no. 9 and 4.20-5 on statement no. 10 and 11 with all the teachers completely or somewhat agreeing with the statement that students can scan , skim and look up details more easily in technology assisted reading passages. Again, on statement no. 12, the response mean of Banana Bidyaniketan, T&T Girl's School and JAAGO school's teachers delves within the range of 4.31-5, asserting that they completely agree that audio-visual technological medium enhances the learners' reading comprehensibility in a reading text. On the same statement, Banani Model High School's teacher also took a somewhat agreeable position with the scale value of 4.

4.1.2.3 Evaluating Learners' Preference of Technological Modes in Enhancing their Reading Comprehensibility:

The statement no. 13-18 of the questionnaire seeks to uncover the learners' preference for specific technological mode in enhancing their reading comprehensibility in ESL context. The questionnaire required participant teachers and students to tick one of the 5 given options from

Likert's scaling that best suits their individual attitude towards the statements. Here, the interpretation key of learners' response in the specified question part is as follows: 1-1.80= they completely disagree with the statements highlighting the learners' preference for given technological modes in enhancing their language reading skills, 1.81-2.60=they somewhat disagree, 2.61-3.40= they have a neutral position regarding the learners' preference towards the specified technology mode in enhancing their English reading skills, 3.41-4.20= implies the belief that they somewhat agree with the statements on the learners' preference for specified technologies in enhancing their language reading comprehension and 4.21-5= implies that they completely agree.

No.	Questions	Banani Bidyaniketan (60)	T&T Girl's High School (55)	Banani Model High School(50)	JAAGO School(36)
13	I would prefer reading blogs and articles in a mobile app rather than reading a passage in the course book.	4.67	3.69	3.52	4.58
14	I think online reading games can promote my reading comprehensibility and interest.	3.17	3.18	3.14	4.19
15	I would like to do an online based reading	4.08	3.81	3.7	4.33

	homework exercise rather than solving those in the existing course book.				
16	I frequently read blogs , articles , journals and stories etc in the internet	4.67	3.46	3.42	4.67
17	I like reading stories and contents in social media more than I like reading a passage on the existing course materials.	3.58	4.23	3.44	4.44
18	Online reading tests that provide instant result can help me make better preparation for an exam.	4.63	3.6	4.52	4.21

Table 4.1.2.3 (a): Mean calculation of the learners' response on the learner preference focused statement questionnaires.

In response to the statement no. 13, 14 and 16, students of Banani Bidyaniketan and JAAGO school alluded a mean response of 4.20-5, i.e. they completely agree with the statement that they prefer reading contents on mobile app, playing reading games more than reading contents from the existing text book and that they frequently read online based contents. On the same statements, the other two school's learners' response delved within the 3.41-4.20 range asserting that they somewhat agree. Again, on statement no. 15, only the mean response of

JAAGO school's students delved within the range of 4.20-5, i.e. they completely agree with the statement that they like solving online reading exercise more than those in the existing textbook. The rest of the 3 school's students' response mean delved within the range of 3.41-4.20 i.e. they somewhat agree. Again, on statement no.17, JAAGO School and Banani T&T Girl's High school's students' response mean showed a complete agreement with the assertion that they prefer reading contents in social media more than those in the books. On the same statement, the other two schools showed a partial agreement. Lastly, on statement no. 18, only Banani T&T Girl's High school's students' mean response showed a partial agreement with the assertion that instant result providing online reading tests can help them make better preparation for an exam. On the statement, the other school's students showed a complete agreement with a mean response range of 4.21-5.

Again, as for the teachers' mean value on the learners' preferred technological mode statements:

No.	Questions	Banani Bidyaniketan (2)	T&T Girl's High School(2)	Banani Model High School(1)	JAAGO School(3)
13	My students would prefer reading blogs and articles in a mobile app rather than reading a passage in the course book.	3	4.5	4	4.67

14	I think online reading games can promote my students' reading comprehensibility and interest.	3	3	3	4.33
15	My students would like to do an online based reading homework exercise rather than solving those in the existing course book.	3	3	3.5	4
16	My students frequently read blogs , articles , journals and stories etc in the internet	4.5	3.5	4	3.67
17	My students like reading stories and contents in social media more than I like reading a passage on the existing course materials.	4	3.5	4	4
18	Online reading tests	5	3.5	4	4.33

	that provide instant result can help my students make better preparation for an exam.				

Table 4.1.2.3 (b): Mean calculation of the teachers' response on the learner preference focused statement questionnaires.

In the above preference questionnaires, the teachers' response for statement no. 13, 16, and 17 mostly delved within the range of 3.41-4.20 and 4.21-5, asserting that they completely or somewhat agree with the statement that their learners' are more comfortable and regular in reading English contents, blogs, articles in internet and other modern technological source. However, a few exceptions in this case can be noted. In case of statement no. 13, the mean of the teachers' response of Banana Bidyaniketon is in the range of 3, asserting that they hold a neutral notion on the preference of mobile app in assisting English reading process among the students. Similarly, in statement no. 16, Banani T&T Girl's High school's teachers' response mean also ranges in the neutral zone asserting that they have neutral perception on the preference of reading online blogs , articles etc. by the students. Again, in cases of statement no. 14 and 15, asserting the preference for online reading games and online based reading homework among students, the teachers' response of Banana Bidyaniketan and Banani TNT girl's school shows a neutral scale with the range of 2.61-3.40 and that of JAAGO school delves in the range of 4.21-5., asserting a completely agreeable position on the statements. The response of the teacher from Banana Model High School also shows a neutral scaling of 3 in case of statement no. 14 and a scaling of "somewhat agree" in case of statement no. 15.

4.1.2.4 Types of Technologies Preferred in Language Classroom to Develop Learners' Reading Skills

The question no. 19 required participants to tick the technologies which they want to use in their language classroom to exercise the learners' reading skills. They were also given an option to mention the name of any other technology which was not given in the list. The responses from the learner questionnaire have been shown in the following table.

Name of the technology	Responses	Percentage
website reading (Journals, articles, news, advertisement)	119	19%
Blogging and social media	77	13%
Online reading games	113	18%
Reading texts accompanied by digital video /Audio	155	25%
Online reading exercise	103	17%
Creating online reading texts through group and pair work	33	6%
E-mail	47	8%
None	21	3%

Table 4.1.2.4 (a): Learners' preferred technological applications (based on learners' questionnaire response)

The following pie diagram represents the above table:

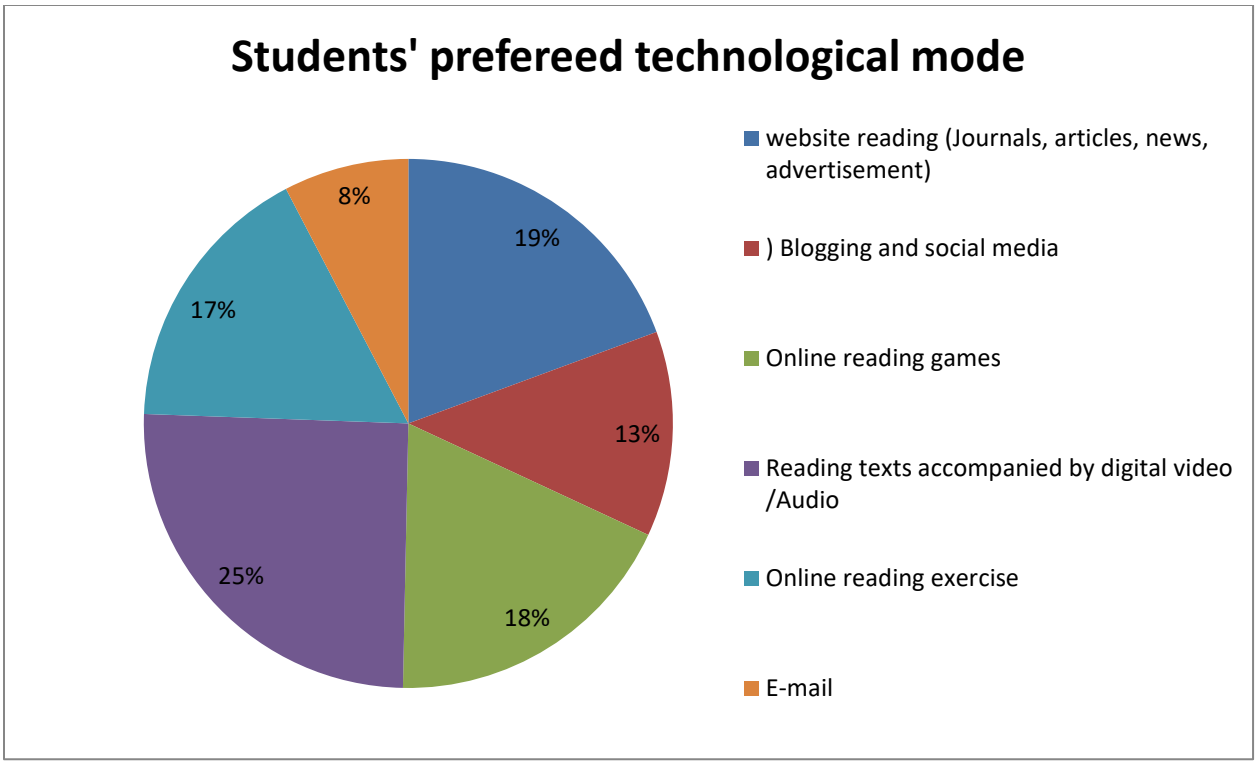

Figure 2**:** Pie diagram representing learners' preferred technological modes in reading classes (based on learners' questionnaire response)

Thus, it appears from the diagram that reading text accompanied by digital video and audio have the highest amount of students' preference in enhancing reading comprehensibility. Immediately after that, website reading gained the second highest preference percentage of 19% and online reading games delves at 18% students' preference. Besides this, 17% students' preference for online reading exercise and 8% preference for email related reading and writing highlights the positive impact of the technologies in enhancing learners' reading comprehensibility.

Again, in case of the teachers' responses to question no. 19, the preferred mode of technological implication by the learners is as follows:

Name of the technology	Responses	Percentage
website reading (Journals, articles, news, advertisement)	8	23%
Blogging and social media	4	12%
Online reading games	3	9%
Reading texts accompanied by digital video /Audio	8	23%
Online reading exercise	6	18%
Creating online reading texts through group and pair work	3	9%
E-mail	5	15%

Table 4.1.2.4 (b): Learners' preferred technological applications (based on teachers' questionnaire response)

The following pie diagram represents the above table:

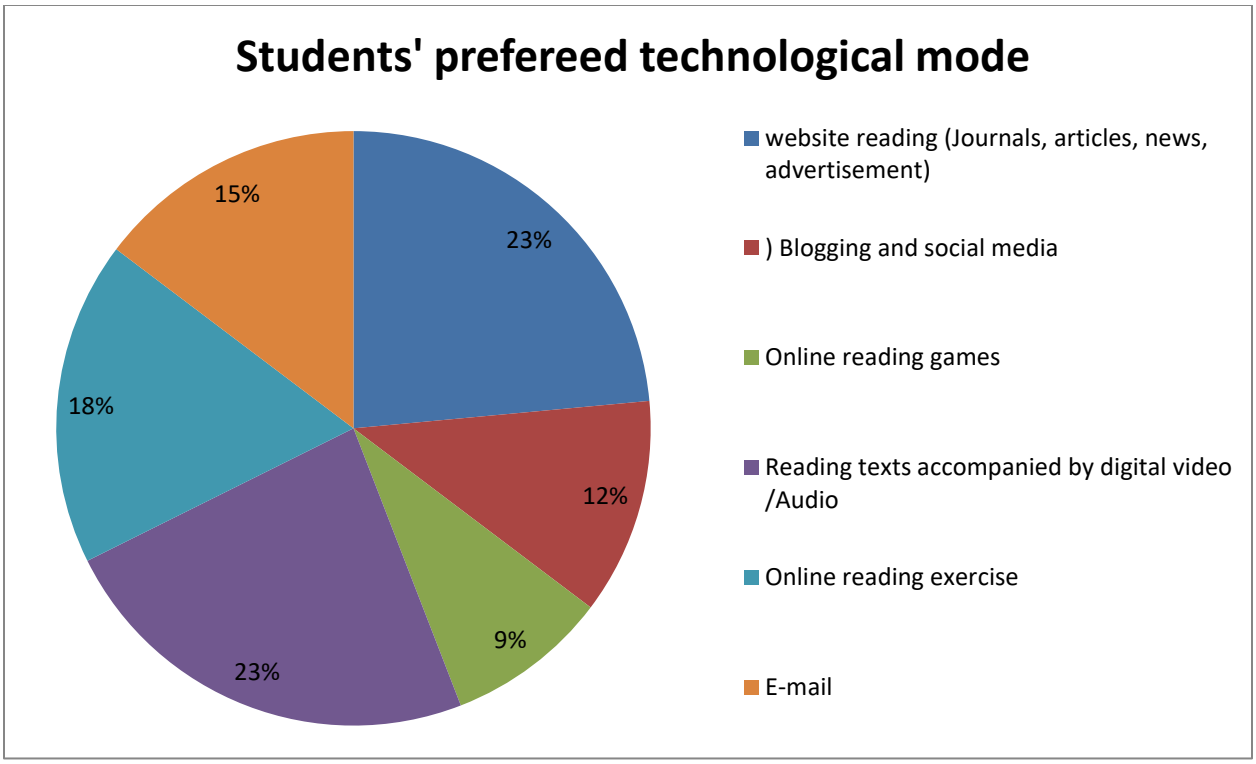

Figure 3: Pie diagram representing learners' preferred technological modes in reading classes (based on teachers' questionnaire response)

Based on the teachers' response, the reported learners' most preferred mode of technological implication in enhancing reading comprehension are website readings and reading text accompanied by audio-visual medium. Again, with a percentage of 18% and 15% respectively, online reading exercise and emails are also noted among the preferred technological mode. However, contrary to learners' questionnaire responses, blogging and social media along with online reading games received less percentage scoring in the teachers' response data.

4.1.2.5 Benefits of Acquiring and Exercising Reading Skills in Multimedia Classes:

The respondents, through placing their subjective opinions in question no.20 of the survey questionnaire, emphasized on the benefits of using varied technological modes in

enhancing learners' reading comprehensibility and skills. Here, some of the phrases used by the students to describe the technology-assisted reading classrooms were- "more colorful and lively", "motivating", "interesting", "pleasing to the eye", "not boring" etc. Again, one of the student's response elaborated on the issue as-"Reading contents only from the book can get monotonous. However, when we get to see visual contents that relate to the texts it provides us more memory retention." Again, another student asserted the positive side of technology assisted reading classroom as-"It's interesting when the visual contents relate to a content that we have read before." As such, it can be asserted from the aforementioned subjective opinion fragments that the multimedia classes indeed have a positive impact on the learners' reading skill and comprehensibility development.

Again, on the same questionnaire, most of the teachers described the multimedia assisted reading classes as being more "learner friendly" and "visually appealing to the learners". One of the teachers specifically mentioned that-"Students tend to get bored and doze off in tradition reading classes. However, in case of multimedia enhanced ones, you can see their increased enthusiasm and motivation." Again, the teachers also manifested that student in the multimedia classes are "more communicative", "more participatory", "less distracted and bored" etc. Therefore, most of the teachers also seemed to possess a positive outlook on the benefits of technology assisted reading classes.

4.1.2.6 Subjective Responses regarding Limitations of Technology Enhanced Reading Classes:

Here, in the survey, question no.22 seeks to unravel the respondents' subjective viewpoint regarding the limitations of multimedia-assisted classes in ESL reading contexts.

Here, the subjective opinion of the students highlights on some of the limitations that they commonly encounter in multimedia reading classes. Here, the noted limitations of such classes, as highlighted through the learners' responses, are- "limited technology enhanced reading resources", "limited multimedia enhanced reading classes", "lack of diversity in technological use in reading classes" etc. Here, an unusual, yet interesting limitation pointed out by one of the students were- "The use of technology assisted online reading exercise, games etc are not provided in the multimedia classes. Only slides containing reading passages are shown. So, it gets boring after a class or two." Again, another student pointed out that- "We are only shown contents in slide. Although we have a computer in our multimedia class, we are not shown any video content as the broken speakers have not been fixed yet."

Again, the teachers' subjective response highlights some more limitations that accompany the multimedia assisted reading classes in the ESL context of Bangladesh. Most of the teachers assert the problem with "budgetary issues" and "logistic issues" as the main limitations of conducting such classes. One of the teacher asserted-"We have to use the same multimedia assisted reading contents over and over again as we are not provided the required funding and resources to create new reading resources." Again, most teachers pointed out that problems with technical issue like- file corruption, load shedding, internet buffering etc. also posits a problem with such classes. Furthermore, it was also noted in the teachers' subjective response that the huge number of students in multimedia classes also presents a problem to its proper implementation in enhancing learners' reading skills and comprehension.

4.2 Qualitative Survey 1: Interview Session with "Target" and "Resource" Group:

The interview session with the "target" group i.e. the students were conducted after the survey session and that with the "resource" group i.e. the teachers were conducted before the survey session. The following information were focused and highlighted in the interview session with both the groups:

In respect to the question of what forms of technology is best for improvising the learners' reading skills and comprehension, the learners asserted the following modes- Internet, mobile apps, reading online news, reading games and exercises etc. They asserted using such technological modes in outside pedagogical contexts to improvise their reading comprehension. One of the students reflected that- "I like reading history, social science and English content from Wikipedia and online sources more than the existing course books." Again, the researcher asked the students of whether the teacher made them practice reading skills like- looking up specific details, looking for main idea, gist etc. in technology assisted reading classes. In this regard, the students of Banani Model High school answered in the negation. They asserted that most of the time they were only asked to read the contents silently or aloud. The students of Banani T&T Girl's High School and Banani Biddyaniketan asserted that the teacher sometimes asked them to do such activities based on multimedia assisted reading contents. On the same question, only the students of JAAGO School showed a complete agreement that the teacher made them look up details, find the main gist etc. in technology enhanced contents.

Furthermore, some of the limitations that crops up in multimedia classrooms were also addressed in the interview session. The students noted on the same limitations that they had mentioned previously in the survey questionnaire pertaining to logistic issues, technological

modes etc. Finally, the researcher asked the students to provide some subjective suggestions on how TELL can be utilized to better improvise their reading comprehension and skills. In this regard, the students provided some interesting suggestions like- "introducing diverse technological modes", "introducing diverse technology mediated reading contents", "providing more multimedia classes" etc. One of the students asserted the fact that- "To improvise our reading comprehension, the students should be allowed to use the technologies to look up and read contents that they prefer. It should not always be the teacher who uses the technology." Furthermore, one of the students, in response to how TELL can be better implemented in the reading programs, asserted that-"It will be better if the teacher uses such technologies along with the courseware to provide us reading contents." Similar suggestions were also presented by other students as well.

Again, in the interview session with the "resource" group, the teacher noted the following technological modes in improvising learners' reading comprehensibility and skills-audio-visual contents, PowerPoint slides, picture assisted reading contents etc. Next, the researcher asked the teachers whether they make the learners exercise their reading skills and sub skills in such multimedia assisted classes. Here, the teacher of Banani Bidyaniketan , T&T girl's school and JAAGO school replied in the affirmation. However, in this regard, the teacher of Banani Model High School asserted-"When it comes to developing reading comprehension, technology serves best, but when it comes to developing reading skills and sub skills, the traditional mode of reading from printed texts is best." Furthermore, in the interview session, all the teachers mentioned the problems with 'logistic" and "budget" as the main problems in multimedia classes. Nevertheless, the frequency of multimedia classes provided to the specified learners in each school was reported to be an issue by the teachers. They informed the researcher that due to

the lack of multimedia classes, adequate exposure could not be provided to the specified learner group all the time. Here, only the teachers of JAAGO school asserted on giving a total of 3-4 multimedia classes each week to their learners from each class. For the other schools, the exposure ranked between 1-2 multimedia classes per week as per reported by the resource group of the schools.

Furthermore, when the researcher asked the teachers to provide some suggestions regarding how TELL can be more appropriately implemented to best exercise the reading skills and comprehensibility of the learners, the teachers presented some valuable suggestions. Some of these suggestions encompassed-" providing more multimedia classes to the students", "providing online based homework to the students", "making the students comfortable with using technology" etc. One of the teachers from the interview session said that- "We should go beyond the conventional technological modes of PowerPoint slides. We should make use of modernized, yet economical technological modes like online reading exercise, to promote reading skills of the students." Again, another suggestion that was posited by most teachers in the interview session was that for a "conglomerated approach" of the traditional reading classes with the multimedia assisted ones in order to ensure maximized development of learners' reading skills. Thus, the portion highlights on some of the significant qualitative data collected from the interview session with the pedagogical participants.

4.3 Qualitative Survey 2: Observation of the Multimedia Assisted Reading Classes:

The researcher observed four English language classrooms; almost all the classroom was more or less multimedia assisted and used varied technological applications. The observations will be analyzed in the following sections.

4.3.1 Forms of Technology-assisted Reading Inputs being provided to the Learners

Upon observing the multimedia assisted classes in the four schools, the researcher noted a similarity in the technology assisted reading inputs being provided in each of the institutions. In all the 4 schools, the primary technology assisted reading inputs provided to the learners were through PowerPoint slides shown by overhead projectors (OHP). The Reading contents were either shown directly from the internet or were previously prepared by the teachers and shown through PowerPoint slides or word documents. The reading contents shown in Banani Model High's and T&T Girl's School's multimedia class were accompanied by pictures. In Banani Bidyaniketan's multimedia class, the reading contents were followed by an associating video content. In JAAGO school's multimedia reading classes, apart from reading contents shown in OHP, the learners were also provided an audio song and a motion video that accompanied the reading text. The motion video and audio file were provided by the use of VCR accompanied TV set in the multimedia class.

4.3.2 The Participation and Responses of the Students in a Multimedia Assisted Reading Classroom

The participation and responses of the learners in multimedia classes were a pivotal aspect of emphasis in the observation by the researcher. The researcher found that keeping in accordance with the teachers' claim in the subjective questionnaire responses and in the interview session, the learners were indeed more communicative and lively in the multimedia classes. However, the researcher noted that in Banani Bidyaniketan, Banani Model High and in Banani T&T Girl's school, due to the large classroom size and student number, the participation and responses to the multimedia accompanied reading contents were significantly higher among

the students sitting in the front of the class than the back. The students at the back seemed to be playing the same passive role as those manifested in the traditional classroom. This was not an issue among the JAAGO school learners due to the small classroom size. As such, the teacher could engage all the students in the multimedia assisted reading contents and task. Again, students from JAAGO School were observed to be more comfortable and responsive to the technological reading modes than the students from the other schools.

4.3.3 The Reading Skills that are Exercised or Learnt by the Learners in Multimedia Enhanced Reading Classroom:

The researcher observed that the teachers taught and the learners learnt various reading skills and sub skills in such multimedia assisted classes, whether consciously or subconsciously. In all of the school, two primary reading skills were being exercised by the students in multimedia classes i.e. silent reading and reading aloud. For example, in Banani Bidyaniketan, the teacher showed a reading content in the PowerPoint slide and read it aloud himself first. Then, the teacher asked the students to read it silently for a few minutes. After that, the teacher selected a few students to read it aloud before moving on to the explanation phase. Again, in JAAGO School, the teacher, before showing the reading contents in the slides, provided a short reading exercise to the students. The reading content was then displayed on the slides accompanied by relatable pictures. After the silent reading and explanation phase, the teacher asked the students to complete the provided exercise by looking up specific information in the displayed slide. In Banani T&T Girl's school, the technology assisted reading content was shown to the learners and was followed by group writing task. This incorporated the aspect of integrated skill development through integrative activity session among the learners. This highlights some

of the noted reading skill practice observed by the researcher in the multimedia assisted reading classes.

4.3.4 Observed Limitations of the Multimedia Reading Classes:

The researcher found that the sizes of the multimedia classrooms were very big and a large number of students were in the class in case of Banani Model High, Banani Bidyaniketan and Banani T&T Girl's school. As such, when the reading contents were being shown in the PowerPoint presentation slides, they were not visible from the back of the vast classroom. Thus, it can be comprehended that the lack of visibility of the contents to the students in the back contributed in their aforementioned lack of participations as well. Furthermore, the researcher also observed in one of the school that although a video content was shown to accompany the reading content, yet, the audio quality of the video was very poor and almost incomprehensible to the learners and the researcher as well. Furthermore, in one of the schools, the researcher noted that despite having a computer with net connection in the multimedia class, the teacher could not show a content that he wanted to from the internet due to its low speed. However, although in JAAGO School the classroom size and other technical problems were not an observed issue, yet, the availability of enough multimedia classes to provide adequate technology enhanced reading exposure to the students was noted to be a problem. Thus, these are some of the limitations that the researcher noted in the observation segment of the data collection process.

Chapter 5: Discussion/Analysis:

The purpose of this study was to explore the students' and teachers' perspectives of learning with technology in higher secondary school level of Dhaka city. The study attempts to find out what technologies are being used to teach different reading skills and language systems and outcome of such technologically advanced classroom. In this regard, the researcher found a substantial amount of fluctuation on the impact of technologies in improvising learners' reading comprehensibility among the participants' perceptions. Furthermore, the research also found from the aforementioned analysis that although most teachers' and learners', now-a –days, have positive attitude towards language learning with technology, yet, the implementation of such is hindered or limited due to logistic and other issues. After gathering all information from the data analysis, the researcher provides the following analysis and recommendation on certain noted issues of the finding:

5.1 Students' Expectations & Preferences of Technological Implementations in the Reading Classroom:

Alike the aforementioned study in the context of USA cited in Shyamlee(2013) and in Save the Children's research in the context of Bangladesh cited in Parvin(2015), the current research's attitude and preference questionnaire also reveals a similar positive perception of the learners' and teachers' on the implementation of technology in enhancing reading comprehension of the students and on their preference for specific technological modes. However, the current research data also presents some fluctuating perceptions of the learners and teachers on technological usage in enhancing learners' reading comprehension. From the aforementioned data analysis to question no. 19, it is revealed that students' and teachers'

perception on the use of technology in ESL reading context varies diversely. That is to say, 23% percent of teachers asserted that learners prefer reading contents that comes with audio and visual medium with only a few percentage votes for reading games and online reading exercise. The rest of the technological reading modes were not emphasized in the survey or the interview session by the teachers. However, from the student's perception it was noted that the technological preference medium for enhancing reading skills delved within the context of online reading games, reading emails, blogs and social media contents etc. along with the ones marked by the teacher. Furthermore, the additional preferred technological medium mentioned by some of the learners entailed e-books, mobile applications that provide reading contents etc. Again, the preference for mobile assisted reading apps received significantly higher mean score from each of the school's participants than those of the preference for computer based ones. This preference can be alluded to the easy availability and accessibility of mobile phones among the learners. Therefore, from this data it can be asserted that as each learner have individual learning style and as contextuality determines technological accessibility, therefore, the preference for varied technologically assisted reading texts exists. These technological preferences, however, cannot always be met, whether it is because of the logistic issues of the pedagogical setting or due to the lack of teacher's training programs.

Again, the study also presents the same learners' attitude towards technology usage in language classroom as those noted in Shyamlee's(2013) study. Here, the subjective opinion of the participants also presents some in-depth insight of the limitations of technology in ESL reading context. Based on the note that in the problem identification question no. 22 many of the students asserted that the use of same technological sources sometimes leads to a drop in learning interest and enthusiasm, therefore, it can be recommended that only the use of

technology assisted reading modes are not enough to sustain the motivation and comprehensibility of the learners. The teachers should align themselves with what they think and what actually are the learners' technological preferences in ESL reading contexts. Based on that, the teachers can make an intelligent variation of technological usage in enhancing reading programs to keep up the liveliness and practicality of the reading sphere. This variation can also play a positive role in making the students realize what technological source best suits their reading needs and interest at an early educational level. Therefore, this realization can help the learners to implement the preferred technological mode in out-of-classroom language learning spheres as well. It can take the learners a step closer to becoming autonomous and active readers in the language. As such, the research highlights the attitude and preference of the learners regarding technological implementation in ESL reading context. The research also represents the gap between what is thought to be the preferred mode and attitude of the learners by the teachers and what actually is. Thus, aligning the perceptions and preferences between the pedagogical participants is a pivotal step towards implementation of a technologically advanced and communicative reading atmosphere in a pedagogical setting.

5.2 Limitations of TELL in ESL Reading Context of Bangladesh

Here, although the current study reveals the same problematic areas of the implementation of TELL in reading context alike those noted in Shyamlee's research, yet, a more in-depth notion of the roots and consequence of the limitations in ESL reading context can be noted from the aforementioned research findings. In the result and finding section, it was noted through the research data that the implementation and attitude towards the use of technology in ESL context is deeply intertwined with logistic issues of the pedagogical setting. That is to say, as reflected in the former section, compared to Banani T&T Girl's School and

Banani Model High School, the teachers and students of Banani Bidyaniketan and JAAGO School had a more positive attitude towards technological implementation in reading classes. As such, the latter two schools also had a more positive scaling in most of the preference and language skill focused questionnaires. Here, through discussion with the focus and resource group and through participant observation, the reason for the slight variation among the focus groups' preferences can be alluded to the frequency of technology enhanced reading classrooms made available to the learners of each institution. While JAAGO is widely renowned for their technology enhanced modern classroom and frequent use of technologies to build up the learners' language skills, Banani Bidyaniketan teachers asserted using 2 multimedia language classes for the specified learner group per week. However, for Banani Model High school and T&T Girl's school this comes down to one multimedia class for each grade per week. The logistic issues, such as, high number of students in each class and section, inadequate multimedia classrooms etc hinder a more frequent use of such technology enhanced language classrooms. Here, although most of the teachers are familiar with the positive impacts of technology in language learning and, thereby, reading, from their teachers training programs, yet, the limited access of technological implementation are constantly hindering their ability to implement the multiple dimensions of technology in enhancing not only the learners reading comprehensibility but also the reading skills.

This logistic issue in pedagogical setting, in turn, determines the learners' attitude and preferences towards technological use in language learning. While it was observed from the preference and attitude questionnaire that most of the learners from all the schools have positive perceptions towards technological implementation in language classroom, yet, the learners of Banani Bidyaniketan and JAAGO foundation scored more positively on the language skill

focused questionnaire than the other two schools that held a neutral scaling or partial agreement on many of the issues. It can be asserted that the frequent use of technological mediums helped the former schools' learners to develop the reading skills and sub skills not by technology but with it. Thus, scanning, skimming and looking up details are made more convenient in multimedia assisted reading contents. However, the limitation of technological application in the other two schools led to the learners still possessing a neutral outlook on the implementation of technology in developing specified reading skills.

Here, to cope with the logistic issues, teachers' training in technological usage is a must requirement. This is a relatively easy solution at present due to the government led teachers' training programs that emphasizes on technological use to promote CLT. However, the more alarming issue is that of budget and logistics. However, even that can be solved through reference to relatable sources. Here, the schools with logistic issues, like Banani Model High and Banani T&T Girl's High school, can easily avail the same stance as those adopted in the aforementioned Save the Children's reading program in the context of Bangladesh. Through doing this, the technological teaching and learning of the schools will go beyond the limited multimedia classrooms and more students will have access to technological reading contents through mobile applications. This can promote silent reading, group and pair works as well as autonomous reading. This implementation in more technologically advanced schools, like JAAGO School, can also bring about a new step in technological revolution in pedagogical contexts. However, even this isn't without a backdrop. Implementing a MALL in pedagogical context will also require an added amount of disciplinary issues in the higher secondary level setting. However, considering the high preference for reading contents through mobile technology in the survey questionnaire, its implementation can definitely bring forth positive

impacts in the language learning process. Again, encouraging home based online reading, online discussion board, online teaching programs etc. can also help to deal with some of the logistic issues of implementing a multimedia classroom.

5.3 Using Technology to Enhance Reading Comprehension and Promote Skill Development among Learners:

Although alike the study by Ponce, Lopez, and Mayer (2012) and others in the literature review portion, the current research data reveals a positive response on the impact of technology in enhancing learners' reading comprehensibility, however, it showed a difference in perception in terms of its impact in enhancing reading skills and sub skills. Again, the data from the result portion further highlights the dichotomy between the students' and teachers' perceptions regarding the impact of technology in enhancing the learners' reading skills and sub skills. That is to say, although all the teachers and students had a positive attitude on the impact of technology in enhancing learners' overall English reading comprehensibility, however, their perceptions fluctuated on the issue of reading skills and sub skills. Here, only the students and teachers of JAAGO School had a totalistic positive attitude on the impact of technology in enhancing the specified reading skills and sub skills of the learners. On the other hand, learners from the rest of the three institutions asserted a neutral or somewhat agreeable position on the statements. Again, the teacher from Banani Model High school disagreed with the aspect that technology can help enhance the learners reading skills like scanning, skimming etc in the unstructured discussion session. Here, it can be asserted that technology, despite its rising propaganda in ESL context, is only viewed as a medium for increasing learners' reading comprehensibility. The aspect of skill development with technology is still an unexplored domain.

Here, the researcher seeks to propose that although the traditional method of reading from printed books definitely makes a pivotal impact on developing learners' reading skills, however, such skill development with technological medium should not be ignored as they are essential in specific higher educational and work domain like international online examinations, online jobs etc. Therefore, at present, it has become essential for the students to develop their skimming, scanning and other reading skills not only in printed course materials but also in technology enhanced reading sources. Thus, implementing technology to develop the young ESL learners' reading comprehensibility as well as skill is a pivotal segment of higher secondary education in the country.

5.4 Theoretical Perceptions of Technological Implementation to Promote Reading Skills:

During the participant observation of the multimedia classes, the researcher noted that the teacher, apart from visual representation of a reading content, also implemented other strategies to promote the reading skills. Some of these strategies include asking the learners to read silently, thus, promoting Krashen's (2011) free voluntary reading or sustained silent reading (SSR) noted in the literature review section. Again, as previously mentioned, the learners were also asked to read aloud the contents shown in the projector in a repetitive pattern. This helps to promote the aforementioned strategy of Joshua Cohen's Repeated Reading (RR). In either of the cases, it helps promote Krashen's environment of low affective filter in the multimedia sphere and thus maximize retention of the reading contents among the learners.

Again, the use of video and audio contents, that the students find relatable and familiar, plays a pivotal part in activating the schema of the learners and maximizing their retention. This corresponds with Rydland, Aukrust, & Fulland (2012)'s theoretical claims in the literature

review section. Finally, it is noted in the literature review portion that Clark and Paivio's(1991) research showed an eight times higher retention among learners when reading contents are presented with visual contents. Here, the high rate of participation of the learners and their enhanced performance, as noted through the observation and discussion session, shows favorability with the claim as well. As such, the use of technology in the pedagogical setting not only corresponds with the learners' attitude and preferences but also proves effective for enhancing reading skills as it corresponds with the strategies for improving reading skills asserted in the research claims that are presented in the literature review section. Thus, it can be claimed that the implementation of TELL in the ESL reading context is imperial considering its theoretical backings regarding its impact on developing learners' reading skills and comprehensibility.

5.5 Conglomerating Traditional Pedagogical Practices with TELL in Promoting Reading Skills and Comprehension:

In the response to question no. 21 of the survey, the students and teachers showed a high level of preference for TELL in the context of enhancing learners' reading comprehensibility over traditional modes. This corresponds with the study result indicated in Behjat, Yamini, and Bagheri (2012) in the literature review portion. However, the same survey questionnaire also pointed out some of the limitations that comes with the TELL mode as pointed out in Shyamlee's (2013) study. Thus, it can be asserted that only TELL is not sufficient to enhance learners' reading comprehensibility. Rather a more balanced approach, i.e. a conglomeration of the two approaches may provide a better result. As such, while most of the students' preferences were in favor of technology enhanced reading programs, however, some of the students and teachers also pointed out a need for a balanced approach as noted in the result and findings section. Here, the

conglomeration of both approaches will not only help to alleviate the problems that comes with TELL in ESL reading context but will also help to cater to the needs and preference for technological implications in the pedagogical sphere. As such, technology, in such conglomerated approach, becomes a medium to assist the reading comprehension and skill development process. It becomes a mode to facilitate the learning process rather than dominating it. Also, through such conglomerated approach, technologies become more "normalized" in the ESL context and become central to facilitating learners' reading skill development and comprehension in a communicative atmosphere. This can also help to create a TELL atmosphere that supports a behaviorist, cognitive, socio-cultural and constructive approach to language learning as reported by Patel (2014). As such, the balanced approach helps to create an environment of low affective filter to better facilitate the ESL reading process.

Chapter 6: Recommendation

Although the current research reflected a number of limitations that comes with the implementation of TELL in an ESL pedagogical context like Bangladesh, yet, the positive responses in favor of technology in enhancing learners reading comprehensibility subsides some of its negative aspects. The researcher found that although almost all the schools, now-a-days, have multimedia classes, yet, its use in promoting language comprehension and skills are very limited. One of the English teachers from the schools mentioned in the interview session that- "Multimedia classes are mostly preserved for science subjects. Authorities prefer that teachers take the English language classes in the traditional way." Again, as noted in the above collected data and analysis, the concept of developing English reading skills and sub skills of learners in the multimedia classes are still very limited among the ESL teachers. Here, the multimedia classes, when provided, are more focused on developing the learners' speaking, writing and listening skills in the language. Developing reading skills in technology enhanced reading contents, although is highly essential in higher educational contexts, is still a neglected domain as compared to the notion of developing the other language skills with technology. As such, the researcher would like to recommend on more teachers' training program and inclusion of more technology assisted reading contents in the existing curriculum by the NCTB in order to raise teachers' and students' awareness regarding the development of reading comprehension and skills in a technology enhanced way. This can also help raise the consciousness of the institutions' authorities regarding the pivotal impact that technology can play in developing the learners' overall language skills and comprehensibility.

However, in this regard, the budgetary issue can posit a hindrance. Here, the principal of one of the renowned Bangla Medium School said-"Due to budget issue, our multimedia classes

are limited. We cannot always provide technology assisted language exposure to each of our classes due to the presence of large amount of sections per class and a large amount of students per section." Here, the researcher would like to recommend that the problem of budget in providing technological exposure to the learners in language classes can be solved by reference to current and retable past researches. The research showed more positive learners' responses towards use of mobile app than that of computer to provide easy technological access towards language learning and teaching. Thus, the use of other more accessible technological modes like mobile apps, alike those implemented in Save the Children's ELT program, along with other economical technological applications should also be taken into account. Otherwise, discrimination in the education system and learners' performance will develop between schools which can provide technologically advanced classrooms and schools which cannot..

The use of such widely available and economical technological access in providing technology enhanced reading contents to the learners will prove effective in enhancing reading comprehension of the ESL learners in both rural and urban pedagogical context of Bangladesh. This can also help the learners to cater to distant learning, online learning etc with technology and, thus, improvise their academic skills and sub skills.

Chapter 7: Conclusion

The current study have found that most of the students and teachers hold positive attitude and preference towards the implementation of TELL in ESL reading context of Bangladesh. However, the limitation that comes with such multimedia classes in the context of Bangladesh, as described above, hinders its proper implementation to a significant extent. Nevertheless, the use of such multimedia classes in ESL reading context is pivotal for developing autonomous and active reading habit in the English language among the students. Such multimedia classes also have a positive impact on cultivating and developing the English language reading comprehension and skills among the learners. This also have a pivotal impact on keeping their language learning motivation and enthusiasm alive. As such, if the limitations of technology enhanced reading classes can be overcome, based on effective recommendations and reference to reliable researches, then this can add a new step to revolutionizing and redefining the concept of development of reading skills and sub skills with technology.

Here, it is to be noted that technology is a widely emphasized pedagogical tool in higher educational domain, both in the country and in foreign context. Therefore, developing language skills and sub skills with technology encompasses an essential segment of future academic and work prospectus of individual learners. Again, in this regard, reading being an essential skill, in ESL and EAP contexts, is to be more widely cultivated among the young learners in order to ensure their maximized participation in higher academic and work spheres. Technology can help them to utilize the acquired reading skills and sub skills in real life situations. Here, through the use of technology enhanced reading contents, the learners can get maximized exposure to authentic reading contents that best suits their individual learner style and interest. This

maximized technological exposure can help them to exercise the language reading skills and comprehension both inside the pedagogical sphere and outside it.

As such, to provide such technology enhanced reading passages to the learners, both NCTB and individual institutions should maximize their effort of providing multimedia classes to the learners. Here, efficient teachers' training program in implementing the technological modes to enhance the learners' reading skills can prove efficient. Then again, a change in outlook of pedagogically effective technological modes can also prove efficient. Here, it is to be recognized by pedagogical participants that the use of projectors, audio-visual videos etc. are not the only effective technological modes. They should familiarize themselves with other not-so-conventional modes like mobile apps, online based reading exercise etc in providing effective reading contents to the learners based on their specified learning styles and the pedagogical contexts.

Here, the main limitations of the research encompassed that of the aforementioned limitation of the availability of a totalistic technology enhanced language curriculum and that of being unable to conduct a practical technology-enhanced reading class in the schools by the researcher. If the limitations could be overcome, it would have increased the practical dispositions of the research's findings and proposals.

Reference

Bean, J. C. (2011). Engaging ideas: The professor's guide to integrating writing, critical thinking, and active learning in the classroom. *San Francisco: Jossey-Bass*, 1-360. Retrieved from- http://www.stfm.org/FamilyMedicine/Vol46Issue2/Minor142

Behjat, F., Yamini, M., & Bagheri, M. S. (2012). Blended learning: A ubiquitous learning environment for reading comprehension. *International Journal of English Linguistics*, *2*(1), 97-106. Retrieved from- http://www.ccsenet.org/journal/index.php/ijel/article/view/14672

Bird, D. K. (2009). The use of questionnaires for acquiring information on public perception of natural hazards and risk mitigation-a review of current knowledge and practice. *Natural Hazards and Earth System Sciences*, *9*(4), 1307-1325.Retrieved from- https://search.proquest.com/openview/4f1f439071ea006cc759fb2706662cfe/1?pq-origsite=gscholar&cbl=105722

Boone, H. N., & Boone, D. A. (2012). Analyzing likert data. *Journal of extension*, *50*(2), 1-5. Retrieved from- http://wiki.biologyscholars.org/@api/deki/files/2002/=Likert_Scale_Analysis.pdf

Boulware-Gooden, R., Carreker, S., Thornhill, A., & Joshi, R. (2007). Instruction of

metacognitivestrategies enhances reading comprehension and vocabulary achievement of third-grade students. *The Reading Teacher*, *61*(1), 70-77.Retrieved from- http://onlinelibrary.wiley.com/doi/10.1598/RT.61.1.7/full

Bratt, S. E., & McCracken, J. (2007). Book review: Modeling with Technology: Mindtools for Conceptual Change (David H. Jonassen). *Educational Technology & Society*, *10* (2), 225-227. Retrieved from- http://www.jstor.org/stable/jeductechsoci.10.2.225

Brown, J. D. (1995). *The elements of language curriculum: A systematic approach to program development*. Boston MA:Heinle & Heinle. Print.

Burston, J. (2013). Mobile-assisted language learning: A selected annotated bibliography of implementation studies. *Language Learning & Technology*, *17*(3), 157-225. Retrieved from- http://llt.msu.edu/issues/october2013/burston.pdf

Chapelle, C. A. (2010). The spread of computer-assisted language learning. *Language Teaching*, *43*(1), 66-74.Retrieved from- https://www.cambridge.org/core/journals/language-teaching/article/the-spread-of-computer-assisted-language-learning/C068150B69C42266D3E2300B08AAE061

Chik, A. (2014). Digital gaming and language learning: Autonomy and community. *Language Learning& Technology, 18*(2), 85-100. Retrieved from- https://scholarspace.manoa.hawaii.edu/bitstream/10125/44371/1/18_02_chik.pdf

Clark, J. M., & Paivio, A. (1991). Dual coding theory and education. *Educational psychology*

review, *3*(3), 149-210. Retrieved from- https://link.springer.com/article/10.1007/BF01320076

Cohen, J. (2011). Building Fluency through the Repeated Reading Method. *English Teaching Forum* , *49*(3), 20-27. US Department of State. Bureau of Educational and Cultural Affairs, Office of English Language Programs, SA-5, 2200 C Street NW 4th Floor, Washington, DC 20037. Retrieved from- https://eric.ed.gov/?id=EJ962385

Dawson, K., Cavanaugh, C., & Ritzhaupt, A. D. (2008). Florida's EETT leveraging laptops initiativeand its impact on teaching practices. *Journal of Research on Technology in Education*, *41*(2), 143-159. Retrieved from- http://www.tandfonline.com/doi/abs/10.1080/15391523.2008.10782526

Dilshad, R. M., & Latif, M. I. (2013). Focus Group Interview as a Tool for Qualitative Research: An Analysis. *Pakistan Journal of Social Sciences (PJSS)*, *33*(1), 191-198. Retrieved from- http://www.bzu.edu.pk/PJSS/Vol33No12013/PJSS-Vol33-No1-16.pdf

Drayton, B., Falk, J. K., Stroud, R., Hobbs, K., & Hammerman, J. (2010). After installation: Ubiquitous computing and high school science in three experienced, high-technology schools. *The Journal of Technology, Learning and Assessment*, *9*(3), 1-57. Retrieved from- https://ejournals.bc.edu/ojs/index.php/jtla/article/view/1608

Driscoll, D. L. (2011). Introduction to primary research: Observations, surveys, and interviews. *Writing Spaces: Readings on Writing*, *2*, 153-174. Retrieved from- https://books.google.com.bd/books?hl=en&lr=&id=u4VPAgAAQBAJ&oi=fnd&pg=PA1

53&ots=ZumkQ2N7WL&sig=kp6Ti2e2dv1Tz2PB7HMCnZr2CNE&redir_esc=y#v=onepage&q&f=false

Dunkel, P. A. (1987). Computer-assisted instruction (CAI) and Computer-assisted language learning(CALL): Past dilemmas and future prospects for audible CALL. *The Modern Language Journal*, *71*(3), 250-260.Retrieved from- http://onlinelibrary.wiley.com/doi/10.1111/j.1540-4781.1987.tb00364.x/full

Graddol, D. (1996). The future of English?. *The British Council*, 1-66. Retrieved from- https://s3.amazonaws.com/academia.edu.documents/33032011/future_of_english.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1511981882&Signature=fGx%2F4tnvY9jeSUvo0wYTkWC9euY%3D&response-content-disposition=inline%3B%20filename%3DThe_Future_of_English.pdf

Greenhalgh, T., & Taylor, R. (1997). Papers that go beyond numbers (qualitative research). *BMJ:British Medical Journal*, *315*(7110), 740-743. Retrieved from- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2127518/

Groff, J. (2013). Technology-rich innovative learning environments. *OCED CERI Innovative Learning Environment project*, 1-30. Retrieved from- http://www.jengroff.net/pubs_files/Tech-Rich-ILEs_GROFF-FINAL.pdf

Gros, B. (2007). Digital games in education: The design of games-based learning environments. *Journal of research on technology in education*, *40*(1), 23-38. Retrieve from- http://www.tandfonline.com/doi/abs/10.1080/15391523.2007.10782494

Haider, M. Z., & Chowdhury, T. A. (2012). Repositioning of CLT from Curriculum to Classroom: A Review of the English Language Instructions at Bangladeshi Secondary Schools. *International Journal of English Linguistics*, *2*(4), 12-22. Retrieved from- http://www.ccsenet.org/journal/index.php/ijel/article/view/16964

Hassan Taj, I., Ali, F., Sipra, M. A., & Ahmad, W. (2017). Effect of Technology Enhanced *Language Learning on EFL Reading Comprehension at Tertiary Level. Arab World English Journal (AWEJ), 8*(1), 108-129. Retrieved from- https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2941443

Hennessy, S., Deaney, R., & Ruthven, K. (2005). Emerging teacher strategies for supporting Subject teaching and learning with ICT. *University of Cambridge Faculty of Education, Cambridge*, 1-14. Retrieved from- https://s3.amazonaws.com/academia.edu.documents/40256942/Emerging_teacher_strategies_for_supporti20151122-17384-11rhbw5.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1511703107&Signature=kstsZs91o1MnUFcnujDOGcSatjQ%3D&response-content-disposition=inline%3B%20filename%3DEmerging_teacher_strategies_for_supporti.pdf

Hicks, A., & Graber, A. (2010). Shifting paradigms: teaching, learning and Web 2.0. *Reference Services Review*, *38*(4), 621-633. Retrieved from- http://www.emeraldinsight.com/doi/abs/10.1108/00907321011090764

Hyman, R.Michael, & Jeremy J.Sierra. (2016). Open-versus Close-Ended Survey

Questions.*Business Outlook, 14*(2), 1-5. Retrieved from- https://www.academia.edu/16266400/Open-_versus_close-ended_survey_questions

Ivy, T. I. (2012). Technology and the language teacher. *Arts Faculty Journal*, *4*, 206-223. Retrieved from- https://www.banglajol.info/index.php/AFJ/article/view/12942

Jamshed, S. (2014). Qualitative research method-interviewing and observation. *Journal of basic and clinical pharmacy*, *5*(4), 87-88. Retrieved from- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4194943/

Kirkwood, A., & Price, L. (2014). Technology-enhanced learning and teaching in higher education: what is 'enhanced'and how do we know? A critical literature review. *Learning, media and technology*, *39*(1), 6-36.Retrieved from- http://www.tandfonline.com/doi/abs/10.1080/17439884.2013.770404

Kranthi, K. (2017). Technology Enhanced Language Learning (TELL). *International Journal of Business and Management Invention, 6*(2), 30-33.Retrieved from- *http://www.ijbmi.org/papers/Vol(6)2/version-4/E0602043033.pdf*

Krashen, S. (1981). Second language acquisition. *Second Language Learning*, *3*(7), 19-39.Retrieved from- https://s3.amazonaws.com/academia.edu.documents/35238869/second_languge_acquisition_and_learning.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1512117796&Signature=m85M2P9779m5pNX5EdkhGOpXNLc%3D&response-content-

disposition=inline%3B%20filename%3DSecond_Language_Acquisition_and_Second_L.pdf

Krashen, S. (2011). Academic proficiency (language and content) and the role of strategies. *TESOL Journal*, *2*(4), 381-393. DOI: 10.5054/tj.2011.274624

Kulik, J. A. (2003). *Effects of using instructional technology in elementary and secondary schools: What controlled evaluation studies say*. Arlington, VA: sri International, 1-72. Retrieved from- https://pdfs.semanticscholar.org/14fc/72501e7793ef0313c5a1f093414689150dba.pdf

Lam, Y., & Lawrence, G. (2002).Teacher-student role redefinition during a computer-based second language project: Are computers catalysts for empowering change?. *Computer Assisted Language Learning*, *15*(3), 295-315. Retrieved from- http://www.tandfonline.com/doi/abs/10.1076/call.15.3.295.8185

Lindenau, S. E. (1984). The teacher and technology in the humanities and arts. *The Modern Language Journal*, *68*(2), 119-124.Retrieved from- http://onlinelibrary.wiley.com/doi/10.1111/j.1540-4781.1984.tb01552.x/full

Lin, C. C. (2014). Learning English reading in a mobile-assisted extensive reading program. *Computers & Education*, *78*, 48-59. Retrieved from- http://www.sciencedirect.com/science/article/pii/S0360131514001171

Mackey, A., & Gass, S. M. (2015). *Second language research: Methodology and design*.

Routledge, 1-425. Retrieved from- https://books.google.com.bd/books?hl=en&lr=&id=jDg-CgAAQBAJ&oi=fnd&pg=PP1&ots=uI-_6vBg2K&sig=4wOnY_5O79NFIOjbFkHNchWt6Eg&redir_esc=y#v=onepage&q&f=false

Mansor, N. (2007).Collaborative learning via email discussion: Strategies for ESL writing Classroom. *The Internet ESL Journal, 13,(3)*. Retrieved from- http://iteslj.org/Techniques/Mansor-EmailDiscussion/

Means, B. (2010). Technology and education change: Focus on student learning. *Journal of research on technology in education*, *42*(3), 285-307. Retrieved from- http://www.tandfonline.com/doi/abs/10.1080/15391523.2010.10782552

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers college record*, *108*(6), 1017-1054. Retrieved from- http://onlinelearningcurriculumcommittee.pbworks.com/f/mishra.pdf

Montrieux, H., Vanderlinde, R., Schellens, T., & De Marez, L. (2015). Teaching and learning with mobile technology: A qualitative explorative study about the introduction of tablet devices in secondary education. *PloS one*, *10*(12). Retrieved from- http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0144008

Motteram, Gary [Ed]. Innovations in Learning Technologies for English Language Teaching.

British Council, 2013. pp. 1-201. Retrieved from- https://www.teachingenglish.org.uk/sites/teacheng/files/C607%20Information%20and%20Communication_WEB%20ONLY_FINAL.pdf

Morgan, M. (2008). More productive use of technology in the ESL/EFL classroom. *The Internet TESL Journal*, *14*(7), 133-158. Retrieved from- http://iteslj.org/Articles/Morgan-Technology.html

Parvin, R. H., & Salam, S. F. (2015). The Effectiveness of Using Technology in English Language Classrooms in Government Primary Schools in Bangladesh. *FIRE: Forum for International Research in Education*, *2* (1), 47-59. Retrieved from- https://preserve.lehigh.edu/fire/vol2/iss1/5/

Patel, C. (2014). Use of Multimedia Technology in Teaching and Learning communication skill: An Analysis. *International Journal of Advancements in Research & Technology, 2*(7), 116-123.Retrieved from- http://www.ijoart.org/docs/Use-of-Multimedia-Technology-in-Teaching-and-Learning-communication-skill.pdf

Pereira, J. (2013). Video Game Meets Literature: Language Learning with Interactive Fiction. *E-Teals: An e-Journal of Teacher Education & Applied Language Studies*, (4), 19-45.Retrieved from- http://ler.letras.up.pt/uploads/ficheiros/11708.pdf

Ponce, H. R., López, M. J., & Mayer, R. E. (2012). Instructional effectiveness of a computer-

supported program for teaching reading comprehension strategies. *Computers & Education*, *59*(4), 1170-1183. Retrieved from- http://www.sciencedirect.com/science/article/pii/S0360131512001340

Riasati, M. J., Allahyar, N., & Tan, K. E. (2012). Technology in language education: Benefits and barriers. *Journal of Education and Practice*, *3*(5), 25-30.Retrieved from- https://s3.amazonaws.com/academia.edu.documents/13145326/11.Technology_in_Language_Education_Benefits_and_Barriers.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1511538624&Signature=V5wDjThOg1voZ6HCKjO%2Bsc4Dgn0%3D&response-content-disposition=inline%3B%20filename%3D11.Technology_in_Language_Education_Bene.pdf

Rydland, V., Aukrust, V. G., & Fulland, H. (2012). How word decoding, vocabulary and prior topic knowledge predict reading comprehension. A study of language-minority students in Norwegian fifth grade classrooms. *Reading and writing*, *25*(2), 465-482. Retrieved from- https://link.springer.com/article/10.1007/s11145-010-9279-2

Sabzian, F., Gilakjani, A. P., & Sodouri, S. (2013). Use of Technology in Classroom for Professional Development. *Journal of Language Teaching & Research*, *4*(4), 684-692.Retrieved from- http://www.academypublication.com/issues/past/jltr/vol04/04/06.pdf

Sadeghi, N., & Soleimani, H. (2015). A description and evaluation of hot potatoes web-authoring software in educational settings. *Theory and Practice in Language Studies*, *5*(11), 2407-2415.Retrieved from-

https://search.proquest.com/openview/72efe0c132df5a74c1d196c6b482961c/1?pq-origsite=gscholar&cbl=2026476

Shapley, K. S., Sheehan, D., Maloney, C., & Caranikas-Walker, F. (2010). Evaluating the implementation fidelity of technology immersion and its relationship with student achievement. *The Journal of Technology, Learning and Assessment, 9*(4), 1-67. Retrieved from- https://ejournals.bc.edu/ojs/index.php/jtla/article/view/1609

Shyamlee, S. D., & Phil, M. (2012). Use of technology in English language teaching and learning: An analysis. *International Conference on Language, Medias and Culture IPEDR, 33*, 150-156. Retrieved from- https://s3.amazonaws.com/academia.edu.documents/36437034/use_of_technology.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1511582691&Signature=aqJM2hMxkea%2BsB4tnjYFVVg5SKI%3D&response-content-disposition=inline%3B%20filename%3DUse_of_Technology_in_English_Language_T.pdf

Tabatabaei, M. A. (2012). The effect of practicing with cloze-elide texts on Iranian intermediate monolingual and bilingual EFL learners' performance in multiple-choice tests of reading comprehension. *International Journal of Academic Research, 4*(2), 118-128. Retrieved from- http://web.b.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=20754124&AN=80224126&h=NkoKMyU9dohFEPcGTdf3%2bLceP3SB%2fVb%2bzvF9eix5IUve6yXYKei%2fo9InDvZM04NAG6ZqyZJkpcjt%2fLvXT6MAZg%

3d%3d&crl=f&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%3dehost%26scope%3dsite%26authtype%3dcrawler%26jrnl%3d20754124%26AN%3d80224126

Taylor, A. (2006). The effects of CALL versus traditional L1 glosses on L2 reading comprehension. *CALICO journal*, 309-318. Retrieved from- http://www.jstor.org/stable/24156249

Warschauer, M. and Meskill, C. (2000). Technology and Second Language Teaching and Learning. in J. Rosenthal (ed) Handbook of Undergraduate Second Language Education. Mahwah, NJ: Lawrence Erlbaum, 1-38. Retrieved from- http://ibrarian.net/navon/paper/Learning__in_J__Rosenthal__ed__Handbook_of_Underg.pdf?paperid=4817759

Wenglinsky, H. (1998). Does it compute? The relationship between educational technology and student achievement in mathematics. *Education Testing Service Policy Information Centre*, 1-41.Retrieved from- https://eric.ed.gov/?id=ED425191

Williams, C. (2011). Research methods. *Journal of Business & Economics Research (JBER)*, *5*(3), 65-72. Retrieved from- https://www.cluteinstitute.com/ojs/index.php/JBER/article/view/2532

Wright, S., Fugett, A., & Caputa, F. (2013). Using e-readers and Internet resources to support comprehension. *Educational Technology & Society*, *16*(1), 367-379. Retrieved from- http://www.jstor.org/stable/pdf/jeductechsoci.16.1.367.pdf

Kalaš, I., Bannayan, H.E., Conery, L., Laval, E., Laurillard, D., Lim, C.P., Musgrave, S., Semenov, A. & Turcsányi-Szabó, M. (2012). *ICT in Primary Education: Analytical Survey. Volume 1, Exploring the Origins, Settings and Initiatives*. Moscow, Russian Federation: UNESCO Institute for Information Technologies in Education. Retrieved from- http://iite.unesco.org/pics/publications/en/files/3214707.pdf.

Vaičiūnienė, V., & Užpalienė, D. (2010). Authentic resources in technology-based ESP learning. *Studies about languages, 17*, 94-98. Retrieved from- https://www.ceeol.com/search/article-detail?id=24625

Vitale, D. C., Armenakis, A. A., & Feild, H. S. (2008). Integrating qualitative and quantitative methods for organizational diagnosis: Possible priming effects?. *Journal of Mixed Methods Research, 2*(1), 87-105. Retrieved from- http://journals.sagepub.com/doi/abs/10.1177/1558689807309968

Vygotsky, L. (1978). Interaction between learning and development. *Readings on the development of children, 23*(3), 34-41.Retrieved from- https://www.colorado.edu/physics/phys4810/phys4810_fa08/4810_readings/vygot_chap6.pdf

Yang, S. C., & Chen, Y. J. (2007). Technology-enhanced language learning: A case study. *Computers in Human Behavior, 23*(1), 860-879.Retrieved from- http://www.sciencedirect.com/science/article/pii/S0747563206000288

Appendices

Appendix A

Questionnaire on the Impact of Technology Enhanced Language Learning (TELL) in Enhancing Learners' Reading Comprehensibility in ESL context (For Learners)

Name: **Name of your institution:** **Class:**

Age: **Gender:**

No.	Questions	Fully Agree 1	Agree 2	Neutral 3	Disagree 4	Fully Disagree 5
1	I think using contents from internet (web pages, e-books etc) is more helpful in increasing my reading ability than the ones from existing course books and notes. (Avwg g‡b Kwi B›Uvi‡bU wfwËK Bs‡iwR cvV¨ welqe¯‘ †hgb- eøM, AbjvBb Lei, DBwKwcwWqv) eZ©gvb †Kvm©eyK n‡Z †ewk Avgvi Bs‡iwR civi ÿgZv e„w× K‡i|)					
2	I find/ think reading texts from a wide range of technological sources (Websites, online journals etc.) is more interesting than those in the course materials. (Avwg g‡b Kwi cÖhyw³MZ Drm					

	(‡hgb- ¸Mj, AbjvBb, Rvbv©j) †_‡K cvV¨ welqe¯‘ cÖ`vb Kiv †Kvm©ey‡Ki cvV¨ DcKiY †_‡K †ewk AvKl©Yxq|)					
3	I think I will be more motivated to read varied reading contents available in technological medium (Journals, texts, articles) rather than the fixed ones in the provided course materials. (Avwg g‡b Kwi cÖhyw³MZ gva¨‡gi g‡a¨ †jvf bvbvwea cvV¨ e¯‘ MZevav †Kvm©eyK Zzjbvq †ewk Drmvn Ki‡e Avgv‡K|)					
4	I think there should be more reliance on technological sources (Web page, internet) for providing varied reading texts in the classroom (Avwg g‡b Kwi bvbvwea Bs‡iwR cvV¨ welqe¯‘ cÖ`v‡bi Rb¨ cÖhyw³i Dci wbf©iZv evov‡bv DwPZ|)					
5	I think reading contents in the internet (Wikipedia, online news journal) is more					

	interesting than those in the existing course book. (Avwg g‡b Kwi B›Uvi‡bUwfwËK cvV¨ welq e¯‘ (DBwKwcwWqv, eøM, B-eyK) eZ©gvb †Kvm©ey‡Ki cvV¨ welq †_‡K †ewk AvKl©bxq|)					
6	I am comfortable with using technology along with the existing course materials to improve my English reading skills. (Avwg eZ©gvb Bs‡iwR †Kvm©eyK DcKib Gi mv‡_ mv‡_ Avgvi Bs‡iwR cvV¨ ÿgZv e„w× Ki‡Z cÖhyw³wfwËK cvV¨ DcKiY co‡Z B"QzK|)					
7	I think the teacher should provide us more access to internet and other technological sources in the classroom to improve our reading skills. (Avwg g‡b Kwi wUPv‡ii DwPZ K¬v‡m AviI †ewk cÖhyw³ cÖ‡qvM Kiv Avgv‡`i Bs‡iwR cvV¨ ÿgZv					

	DbœwËi Rb¨|)					
8	I don't think technology is required for improving my reading skills as the existing course materials are sufficient. (Avwg eZ©gvb Bs‡iwR †Kvm©eyK DcKib Gi mv‡_ mv‡_ Avgvi Bs‡iwR cvV¨ ÿgZv e„w× Ki‡Z cÖhyw³wfwËK cvV¨ DcKiY co‡Z B"QzK|)					
9	I can scan/look for key information (keywords, vocabularies, numbers etc) more easily in technology assisted reading texts than the printed course book. (Avwg cÖhyw³ mnvqK cv‡V (eøM, AvwU©‡Kj) †Kvm©eyK A‡cÿv mn‡R bvbvwea Z_¨ mÜvb Ki‡Z cvwi|)					
10	I can catch the main gist (theme, structure, genre etc) of a reading passage more easily in a technologically assisted reading passage than the printed course material.					

	(Avwg cÖhyw³ mnvqK cvV¨ gva¨‡g (eøM, AvwU©‡Kj) gyw`ªZ †Kvm©eyK A‡cÿv mn‡R cÖavb hyw³, w_g cÖe„wË LyuR‡Z cvwi|)					
11	I can look up details in an online reading passage more easily than the printed text. (Avwg cÖhyw³ mnvqK cvV¨ gva¨‡g gyw`ªZ †Kvm©ey‡Ki Zzjbvq mn‡R bvbv we¯ÍvwiZ I Z_¨ LyuR‡Z cvwi|)					
12	I think my reading comprehensibility is enhanced if the reading passage comes with an audio, picture or motion video. (Avwg g‡b Kwi Avgvi Bs‡iwR civi ÿgZv I †evaMg¨Zv we¯Ívi cv‡e hw` civi DËi¸wj AwWI Ges wfwWI Gi mv‡_ Av‡m|)					
13	I would prefer reading blogs and articles in a mobile app rather than reading a passage in the course book.					

	(Avwg †Kvm©eyK A‡cÿv †gvevBj Apps- G eøM, AvwU©‡Kj, Ges bvbvwea AbjvBb Lei ci‡Z †ewk ¯^v"Q›`¨ †eva Kwi|)					
14	I think online reading games can promote my reading comprehensibility and interest. (Avwg g‡b Kwi, bvbvwea cvV¨ †Mgm (‡hgb-auvauv, kã Ges MÖvgvi †Mgm) Avgvi Bs‡iwR civi `ÿZv e„w×‡Z mvnvh¨ K‡i|)					
15	I would like to do an online based reading homework exercise rather than solving those in the existing course book. (Avwg GKwU eZ©gvb Bs‡iwR †Kvm©ey‡Ki MÖvgvi exercise mgvav‡bi †P‡q AbjvBb wfwËK cvV¨ exercise evwoi KvR wn‡m‡e Ki‡Z ‡ewk DrmyK|)					

16	I frequently read blogs , articles , journals and stories etc in the internet (Avwg cÖvqkB B›Uvi‡bU G eøM, AvwU©‡Kj Ges Rvb©vj cvV Kwi|)					
17	I like reading stories and contents in social media more than I like reading a passage on the existing course materials. (Avwg †dmeyK, UzBUvi G bvbvwea Mí Ges cvV¨ eZ©gvb Bs‡iwR †Kvm© ey‡Ki †_‡K co‡Z †ewk cQ›` Kwi|)					
18	Online reading tests that provide instant result can help me make better preparation for an exam. (ZvrÿwbK djvdj cÖ`vb Kiv AbjvBb cvV¨ cixÿv¸wj Avgv‡K ¯‹z‡ji cwiÿvi Rb¨ fvj cÖ¯'wZ wb‡Z mvnvh¨ K‡i|)					

(19) Which of the following technologies do you think will help you become a better reader in English language both in and outside your classroom? You can tick more than one option:

(নিচের কোন কোন প্রযুক্তিগুলি তোমার ইংরেজি পাঠ উন্নয়ন এ সাহায্য করতে পারে বলে মনে কর? একটির বেশি টিক করতে পারো)

(a) website reading (Journals, articles, news, advertisement) (b) Blogging and social media interaction (c) Online reading games (d) Reading texts accompanied by digital video and Audio (e) Online based reading exercise (f) E-mail (g) Creating online reading texts through group and pair work (h) None

Others_____

(20) How will the use of these technologies in your syllabus content help you become a better reader? Give your opinion:

(ইংরেজি ক্লাস-এ প্রযুক্তির প্রয়োগ কিভাবে তোমাকে একজন ভাল পাঠক হতে সাহায্য করবে ইংরেজি তে? তোমার মতামত দাও:)

_____

_____

(21) What do you think about the result of a technologically assisted classroom in terms of enhancing your reading ability? Is it better than the existing classroom? Explain your perspective:

(cÖhyw³ cÖ‡qv‡Mi d‡j †Zvgvi Bs‡iwR cv‡Vi Dci wKiæc cÖfve c‡i? GwU wK MZevav Bs‡iwR cv‡Vi †_‡K fv‡jv? gZvgZ `vI;)

_____

_____

(22) Do you face any problems in the multimedia assisted reading classrooms? If so, what are some of the limitations of such classrooms according to your perception?

(প্রযুক্তি cÖ‡qv‡Mi d‡j তোমার Bs‡iwR cv‡V কখন সমস্যা হয়েছে কি? হয়ে থাকলে নিজের ভাষায়ে এই প্রযুক্তি cÖ‡qv‡Mi কিছু খারাপ দিক গুলি তুলে ধর:)

_____

_____

Appendix B

Questionnaire on the Impact of Technology Enhanced Language Learning (TELL) in Enhancing learners' Reading Comprehensibility in ESL Context (For Teachers)

Name: **Name of your institution:** **Educational Background:**

I have been teaching for _____ years /month

No.	Questions	Fully Agree 1	Agree 2	Neutral 3	Disagree 4	Fully Disagree 5
1	I think using contents from internet (web pages, e-books etc) is more helpful in increasing my students' reading ability than the ones from existing course books and notes.					
2	I find/ think reading texts from a wide range of technological sources (Websites, online journals etc.) is more interesting to my students than those in the course materials.					
3	I think my students will be more motivated to read varied reading contents available in technological medium (Journals, texts, articles) rather than the fixed ones in the provided course materials.					
4	I think there should be more reliance on technological sources (Web page, internet) for providing varied reading texts to the students in the classroom					

5	I think reading contents in the internet (Wikipedia, online news journal) is more interesting to my students than those in the existing course book.					
6	My students are comfortable with using technology along with the existing course materials to improve my English reading skills					
7	I think the institution should provide the students more access to internet and other technological sources in the classroom to improve their reading skills..					
8	I don't think technology is required for improving my students' reading skills as the existing course materials are sufficient					
9	My students can scan/look for key information (keywords, vocabularies, numbers etc) more easily in technology assisted reading texts than the printed course book.					
10	My students can catch the main gist (theme, structure, genre etc) of a reading passage more easily in a technologically assisted					

	reading passage than the printed course material.					
11	My students can look up details in an online reading passage more easily than the printed text.					
12	I think my students' reading comprehensibility is enhanced if the reading passage comes with an audio, picture or motion video.					
13	My students would prefer reading blogs and articles in a mobile app rather than reading a passage in the course book.					
14	I think online reading games can promote my students' reading comprehensibility and interest.					
15	My students would like to do an online based reading homework exercise rather than solving those in the existing course book.					
16	My students frequently read blogs , articles , journals and stories etc in the internet					
17	My students like reading stories and contents in social media more than I like reading a					

	passage on the existing course materials.					
18	Online reading tests that provide instant result can help my students to make better preparation for an exam.					

(19) Which of the following technologies do you think will help your students to become a better reader in English language both in and outside your classroom? You can tick more than one option:

(a) website reading (Journals, articles, news, advertisement) (b) Blogging and social media interaction (c) Online reading games (d) Reading texts accompanied by digital video and Audio (e) Online based reading exercise (f) E-mail (g) Creating online reading texts through group and pair work (h) None

Others_____

(20) How will the use of these technologies in your syllabus content help your students become a better reader? Give your opinion:

_____

_____

(21) What do you think about the result of a technologically assisted classroom in terms of enhancing your students' reading ability? Is it better than the existing classroom? Explain your perspective:

_____

_____

(22) Do your students face any problems in the multimedia assisted reading classrooms? If so, what are some of the limitations of such classrooms according to your perception?

_____

_____