

**MASTER'S THESIS**  
**Master's Programme in Multicultural and**  
**International Education**  
**August 2019**

Computer-Assisted Language Learning at the Higher Secondary  
School (College) in Bangladesh

Thesis submitted in partial fulfilment of the requirements for the  
degree Master of Multicultural and International Education (MIE)

MD NAZRUL ISLAM

**OSLOMET**

**OsloMet – Oslo Metropolitan University**

**Faculty of Education and International Studies**  
**Department of International Studies and Interpreting**

## Abstract

Computer Assisted Language Learning (CALL) is one of the most critical tools and techniques that can help to improve the students' language competencies. This new technology in language education has amplified learner autonomy, creativity, productivity and group work. The intended use of modern educational technology can increase both learning and teaching (Webster and Murphy, 2008) and the introduction of the computer into foreign language instruction appears to conform to the statement. The world is heading towards a knowledge of the economy, and a lot of money will be provided in Computer Assisted Language Learning (CALL). However, the investment will be successful if the students, teachers and administrators can comprehend the importance of it and the teachers can execute the system properly. According to Levy (2008), active CALL necessitates the teachers to select the appropriate resources and tools based on learners' level and needs. So, teachers' training is essential for the successful implementation of CALL. This study attempted to explore the existing facilities of the schools, the problems and future possibilities in Bangladesh. It also determined on students', teachers' and heads' opinion regarding CALL. The study was accompanied to find out the answers of three central research questions.

Sixteen students, six language teachers and two heads of 2 schools were interviewed to collect data. Theory of behaviourism and social constructivism (Vygotsky, 1978) were used to investigate the data. From the analysis, it was found that both of the schools did not have enough facilities required for CALL because of available fund. The students were very much eager to use technology in language learning, but the teachers were not very much trained in CALL and its benefits. They scarcely had any knowledge of different uses of the internet and other e-tools for language teaching. So, they suggested different sorts of training that would be effective for them. The principals of both schools gave a positive response in their interviews for future development.

This study suggests that trained teachers, the assistance of the institutions and available fund are essential to implement CALL at the higher secondary school. So, it is high time for the teachers and policymakers of higher secondary schools to think about the execution of CALL in Bangladesh.

## Abbreviations

ADB	Asian Development Bank
BAL	Bangladesh Awami League
BIAM	Bangladesh Institute of Administration and Management
BIDE	Bangladesh Institute of Distance Education
BNP	Bangladesh Nationalist Party
BNU	Bangladesh National University
BOU	Bangladesh Open University
BRAC	Bangladesh Rural Advancement Committee
CAI	Computer Assisted Instruction
CALL	Computer Assisted Language Learning
CALT	Computer Assisted Language Teaching
CLT	Communicative Language Teaching
CMC	Computer-Mediated Communication
EFL	English as a Foreign Language
ESL	English as a Second Language
FTP	File Transfer Protocol
GEM	Global Education Monitoring
HSC	Higher Secondary School Certificate
HTML	Hyper Text Markup Language
IER	Institute of Education and Research
IT	Information Technology
MKO	More Knowledgeable Other
NAEM	National Academy of Educational Management
NBC	Network-Based Communication
NBLT	Network-Based Language Teaching
NGO	Non-Governmental Organisation
NIEAR	National Institute of Education, Administration, Extension and Research
PACE	Post Primary and Continued Education
PDP	Parallel Distributed Processing
PLATO	Programmed Logic for Automated Teaching Operation

SAC	Self-Access Centre
SDT	Social Development Theory
SNC	Social Networking Communities
SSC	Secondary School Certificate
TEFL	Teaching English as a Foreign Language
TELL	Test of English Language Learning
TESOL	Teaching English to Speakers of Other Languages
TQI	Teaching Quality Improvement
TTC	Teachers Training College
ZPD	Zone of Proximal Development

IJSER

## Table of Contents

<b>Abstract</b> .....	I
<b>Abbreviations</b> .....	II
<b>Table of Contents</b> .....	IV
<b>1. Introduction</b> .....	<b>1</b>
1.1 Contextual framework of the study .....	2
1.1.1 Brief history of the context and epistemology of the study .....	2
1.1.2 The political culture .....	4
1.1.3 The main streams of education .....	5
1.1.4 The major categories of education .....	5
1.1.5 English as a subject and foreign language .....	6
1.2 Rationale .....	7
1.3 Purpose of the study .....	7
1.4 Objectives of the study .....	8
1.5 Research questions .....	8
1.6 Structure of the thesis .....	8
<b>2. Background and Literature review</b> .....	<b>10</b>
2.1 CALL and CALT .....	10
2.1.1 Behaviorist CALL .....	11
2.1.2 Cognitive and communicative CALL .....	12
2.1.3 Socio-cognitive CALL .....	13
2.1.4 Social constructivism .....	14
2.2 Necessity of CALL .....	16
2.3 In-person interaction vs computer-mediated communication .....	17
2.4 Self-access centre .....	18
2.5 Blog .....	20
2.6 Podcast .....	22
2.6.1 How to create and use podcast .....	23
2.7 Facebook in language teaching .....	23
2.8 Other tools of language learning .....	25
2.8.1 E-mail .....	25
2.8.2 Skype .....	25

2.8.3	Listserv .....	25
2.8.4	Wiki .....	26
2.9	The virtual world: distance education .....	26
2.10	E-learning and distance education perspectives .....	28
2.10.1	Scenarios of e-learning for Bangladesh .....	28
2.10.2	Challenges for Bangladesh in E-learning .....	29
2.11	Teacher training on CALL .....	29
2.11.1	Teacher training in Bangladesh .....	31
<b>3.</b>	<b>Theoretical Framework and Conceptual Framework .....</b>	<b>35</b>
3.1	Theoretical framework .....	35
3.1.1	Behaviorist theory .....	35
3.1.2	Social constructivism (development) theory .....	39
3.2	Conceptual framework .....	42
<b>4.</b>	<b>Research Methodology .....</b>	<b>47</b>
4.1	Introduction .....	47
4.2	Research design .....	47
4.3	Research process .....	51
4.4	Location selection .....	51
4.5	Gaining access .....	52
4.6	Sample selection .....	52
4.6.1	Research participants .....	54
4.7	Observation .....	56
4.8	Interview preparations .....	58
4.9	Interview guides .....	58
4.10	Setting .....	58
4.11	Interviews .....	60
4.11.1	Focus group discussion .....	60
4.11.2	Teachers and principals' interview .....	65
4.11.3	Teachers interview .....	65
4.11.4	Principals interview .....	65
4.12	Data analysis .....	66
4.13	Ethical concerns .....	68
4.13.1	Informed consent .....	69

4.14	Trustworthiness in the study .....	70
4.14.1	Transferability .....	72
4.14.2	Credibility .....	73
4.14.3	Conformability .....	73
4.14.4	Dependability .....	73
4.14.5	Authenticity .....	74
4.15	Limitations .....	74
<b>5.</b>	<b>Findings .....</b>	<b>76</b>
5.1	Purpose of using technology .....	76
5.1.1	Students perspective of using technology .....	76
5.1.2	Teachers perspective of using technology .....	77
5.2	Technology for language teaching and learning .....	78
5.2.1	Students' perspectives .....	78
5.2.2	Teachers' perspectives .....	79
5.2.3	Homework .....	80
5.2.4	Internet and social network .....	80
5.3	Teachers role in using technology .....	81
5.3.1	Problems in using technology .....	81
5.3.2	Mobile technology for language learning .....	82
5.4	Language website for learning a language .....	82
5.4.1	Distraction from a particular website .....	83
5.4.2	Comparison of web materials and real materials .....	83
5.5	Suggestions and future possibilities .....	84
5.5.1	Suggestions .....	84
5.5.2	The possibilities for future language learning .....	86
<b>6.</b>	<b>Discussion .....</b>	<b>88</b>
6.1	Overview .....	88
6.2	Discussion based on research questions .....	88
6.3	Discussion based on theoretical framework .....	91
<b>7.</b>	<b>Summary and conclusion .....</b>	<b>95</b>
7.1	Introduction .....	95
7.2	Summary of the findings .....	95
7.3	Contribution to research .....	96

7.4	Practical implication .....	96
7.5	Recommendations .....	96
7.6	Further studies .....	97
7.7	Conclusion .....	97

IJSER



## 1. Introduction

The purpose of this qualitative study is to explore and analyze how and to what extent teachers and students use technology for language learning, challenges and future possibilities. This explains the keen interest in combining different methodologies with instructional technologies that promise to motivate learners and to respond effectively to their needs (Mahrooqi and Troudi, 2014). Technology-mediated language learning is an alternative that many higher secondary institutions have begun to investigate as a way to remove the difficulties. Until recently there was reluctance in the higher education societies to integrate technologies due, mainly, to an inability of the technologies to deliver the amount and quality of interpersonal communication that is considered central to the facilitation of higher order thinking abilities (such as that advanced in small group discussions, Socratic dialogue, collaborative learning, brainstorming, debriefing, case analyses, problem based learning, etc.). This scenario, however, has altered. The type of interaction that is considered central to many educators can be prolonged through new communication technologies such as computer mediated language learning and teaching. In certain applications these technologies are also proving to be cost effective and user-friendly to language learners who are experiencing time, place, or situational barriers (Bates, 1995) while supporting the development of higher order thinking skills (Newman, Webb & Cochrane, 1995; Bullen, 1997). For these reasons many higher secondary institutions are assimilating communication and instructional technologies into their language teaching agendas. Though, how successful technology-mediated language learning activities will be at facilitating higher order thinking skills will be reliant on upon the method taken to the design, delivery, selection, and utilization of appropriate and effective technologies with a support structure to maintain and sustain the language learning transactions (Pisel, 1995; Schreiber, 1998). This often demands educators to obtain new perspectives in a number of diverse areas - one of which is philosophical orientation to language teaching and learning. One's philosophical orientation will order how educators will view teaching, learning, knowledge (Darkenwald & Merriam, 1982), and the use of technology. And, while one's working philosophy will not undertake problems educators encounter when integrating technologies, it can assist in understanding and guiding decision making. The result, according to Darkenwald and Merriam, is intentional and informed repetition where decisions regarding the application of technologies are made more studiously and rationally. Educators who clarify and articulate their philosophical position about the usage of technologies in the language

learning process know what they are doing as they use technologies to facilitate language learning, as well as why.

A research paper shows that a student of Bangladesh spends about 1600 hours learning English language before getting into university where 1000 hours instructional time is enough to become proficient in a language (Rahman, 1998). However, they cannot interact in English even after spending so many hours in learning English. So, it is essential to examine the present situation, challenges and future options of computer-assisted language learning and teaching, although there are a few researchers in this field, however, it is not sufficient to assume actual conditions in Bangladesh. This study endeavored to find out the existing facilities of the schools and students, teachers and heads behavior about technology. It also focused on students, teachers and principals' opinion regarding CALL. The findings discussed with the perspectives of behaviorism and social constructivism theory in relation with epistemology and other philosophy.

## 1.1 Contextual framework of the study

In this section, I discussed the brief history of the context of the study (1.2.1), political culture of the main political parties (1.2.2), the education system and main stream of education (1.2.3), major categories of education (1.2.4) and English as a subject and foreign language at the higher secondary school.

### 1.1.1 Brief history of the context and epistemology of the study

Hegemony of Western knowledge originate from a specific way in which European intellectuals, academics, scientists, teachers, and writers have described the 'Orient'. The concept of, and knowledge about the 'Orient' and the 'Oriental' has been generated and created out of an unequal power relationship (Said 2003, p.40). Tucker (1999) describes that this has created a descriptions and understandings of countries and societies in the South based on "historical imagination" where cultures are reduced to frozen stereotypes, and where development discourses have been used to legitimize human exploitation, colonialism, slavery, and genocide (Tucker 1999, p.8). Western epistemology's hegemonic position is linked to what can be described as the 'global architecture of education'. Jones (2007) describe the global architecture of education as a "complex web of ideas, networks of influence, policy frameworks and practices, financial arrangements and organizational structures—a system of global power

relations that exerts a heavy, even determining, influence on how education is constructed around the world” (Jones 2007, p.325). Jones (2007) describes that much of today’s professional and academic life can be understood in terms of the global reach of transnational academic and epistemic communities and networks. Academic and epistemic communities and networks interact with states, transnational organizations, civil society, and the private sector to influence policy development and implementation through research, and methods of creating and confirming knowledge (Jones 2007, p.330). Knowledge production about the South is carried out in an unequal power relationship where resourceful Western scholars too often are the ones carrying out studies about the South, while Southern scholars are deprived of resources to neither study the South, nor the West/North. This has resulted in a situation where scholars, students and people in the South “can no longer recognize themselves in the discourses that claim to portray them” (Tucker 1999, p.13). This creates an epistemological gap that according to Breidlid (2013) is found in teaching methods and contents in classrooms in today’s South. The contents and methods used are only “minor adaptations of what is being taught in the West/North”, something that makes it difficult for students in the South to understand because “their own cultures and worldviews are seldom, if ever”, considered “beyond their folkloristic aspects” (Breidlid 2013, p.2-3). Vavrus (2009) confirms this by describing how teacher students struggled transform theoretical knowledge demonstrated in class to practice because they did not have “a cultural framework in which to place the discourse and methods used in our class” (Vavrus 2009, p.306).

After almost 200 years of colonial period from 1947 to 1971 East Pakistan (Bangladesh) was West Pakistani (Pakistan) colony. When Pakistani regime established to rule East Pakistan. That period West Pakistan made new primary schools and primary school goers were increased significantly, whereas in East Pakistan both primary school and school goers were decreased alternatively. The graph shows the primary school availability in East and West Pakistan from 1950 to 1971. It is clearly assumed that East Pakistan was deprived in education that time in primary education but also all levels of education.

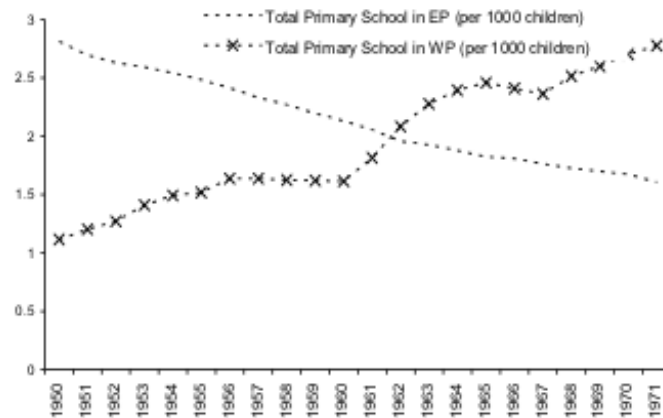


Figure 1: School going students, aged 5-14 (Asadullah, 2010, p.14)

Educational inequalities in undivided Pakistan were systematic, they should have prevailed at all levels of education. Barring only two categories, Arts and Science colleges and teacher training institutes, West Pakistan had an absolute advantage in the availability of higher education facilities. Given the initial backwardness of the Eastern wing, one would have expected some equalization in regional supplies in the later years, for instance, through greater allocation of new units to East Pakistan. Nonetheless, data reveals a further divergence in higher education infrastructure instead. Altogether, the status quo in primary and post-primary education, therefore, confirms the conjecture of systematic educational inequalities and hegemonic behavior between East and West Pakistan at almost all levels of education.

### 1.1.2 The political culture

After nine months of freedom fight, Bangladesh became independent in 1971. From 1975 to 1991 army ruled the country and there were various types of movement when education system did not get priority at all. Then overcoming military regime, it returned to civil law in 1991, Bangladesh started a multi-party parliamentary democratic system. However, the political culture and stability of democratic institutions have been marked since the beginning because of hostility and continuous violence between the two main political parties, namely the current ruling party Bangladesh Awami League (BAL) and Bangladesh Nationalist Party (BNP). Both parties have dispositional attributions (attribution theory) so that they could not left out their innate factors (Breidlid, 2013). According to Global Education Monitoring (GEM) Report (country case, 2017), the concentration of power in the hands of a few people or offices (for instance, Prime Minister's Office), factional politics in the institutions, and the absence of opposition from the Parliament leading to fragile checks and balances have had a severe impact

on the policy domain. There was no accountability, no quality monitoring, or no equity and equality.

### 1.1.3 The main streams of education and teachers training

Education in Bangladesh has three main phases - primary, secondary and higher education. There is another stream of education in Bangladesh called Kindergarten education or pre-primary education aged 3 to 5 years and according to my experience, it is not regulated by the government. Primary school is a 5-year cycle, whereas secondary education is a 7-year. There are three sub-cycles in secondary education: junior secondary 3 years, secondary education two years, and higher secondary education (college) 2 years. The entry age for the primary school is six years. The junior secondary 11-13 year, secondary 14-15 and higher secondary stage 16-17-year age are designed for students. Higher secondary is followed by higher education in general, technical, technology and medical streams requiring 5 to 6 years to obtain a master's degree. According to National Education Policy (2010), primary education is an 8-year cycle, and secondary education is a 4-year cycle (p. 6 & 14). However, it is still in progress. Hossain (2010) categorizes the secondary education into three sub-categories—junior secondary (grade 6 to 8), secondary (grade 9 to 10) and higher secondary (grade 11 to 12). Breidlid (2005c) states,

A national curriculum is in a way a sense of constructing a national identity where certain cultural values are promoted, others are not. Such a selection is indeed very contentious because it most certainly means that the cultural heritage of many school children is not being valued. (p. 251).

In Bangladesh, there are 116 Teacher Training Colleges (TTCs) (15 governments and 101 private) that offer 1-year Bachelor of Education (B. Ed) degree to the secondary school teachers (Pouzevara and Khan, 2007, p. 11). In addition to these TTCs, NIEAR (National Institute of Education, Administration, Extension and Research), IER (Institute of Education and Research), BIDE (Bangladesh Institute of Distance Education), NAEM (National Academy of Educational Management) and some other private institutions provide training for the teachers of secondary level but there is not always an English specialist to train the English teachers (Rahman, 1998, p. 99). Teachers hardly receive any training for teaching a particular subject, and as a result, they show in the classrooms through age-old methods and techniques (Khan, 2005, p. 119). Moreover, the syllabuses of the real training focus more on the theoretical aspects of teaching method, and as a consequence, the trainees cannot utilise their knowledge in the classroom situation (Rahman, 1998 and Yasmeen, 2005). Unluckily, policymakers ignore these

subjects that make a gap between the understanding of training and the things practised. At present, ADB (Asian Development Bank) is funding TQI-SEP 2005-2011 (Teaching Quality Improvement in Secondary Education Project) that provides training to all eligible teachers of grades 6-10 in government and private schools (Pouzevara and Khan, 2007, p. 13). There are also some government projects like ELTIP, PERC for secondary and primary English teachers but lack of coordination in these projects is often responsible for not achieving the expected result (Khan, 2005, p. 120). To make up this lacking, BRAC, an NGO has come forward with the project named PACE (Post Primary and Continued Education) where the local authorities provide training to the secondary English teachers and also teacher trainers (Khan). It has been showed that there is no pre-service training for the teachers of higher secondary level except the three months training provided by one higher secondary teacher training college to their teachers. From Quader's (2005) report, it has been discovered that the training takes place in several venues like Bangladesh Institute of Administration and Management (BIAM), and some other sites. Conversely, none of the pieces of training discussed above educates teachers with the knowledge of technology and its advantages.

#### 1.1.4 The major categories of education

The education system of Bangladesh is broadly divided into three major categories—general education, madrasa education and vocational education (Anwar, 2006). “Primary education, secondary education and tertiary education are the three parts of general education” (Pouzevara and Khan, 2007, p.9). Primary education, managed by the Ministry of Primary and Mass Education, is consisted of grade 1 to 5 (Pouzevara and Khan). The students who get their higher secondary certificate (HSC) can enroll in tertiary education. They can go for 3-year degree pass course in degree level college or 4-years honors course based on their capacity and interest (Patra et al., 2010). There are total 88 universities in Bangladesh—31 public universities and 54 private universities<sup>1</sup>. Bangladesh National University (BNU) and Bangladesh Open University (BOU) are two special universities where the former offers university courses in affiliation with different colleges and the later provides non-campus distance education (Patra et al. 2010). Besides private universities, there are two international universities that provide world class standard education (Patra et al.). Madrasa education is very similar to general education, but the secondary phase is known as Dakhil and higher secondary

---

<sup>1</sup> <http://www.ugc.gov.bd/university/?action=public>

stage is known as Alim. (Anwar, 2006) Technical and vocational courses are offered in vocational and trade institute after the completion of primary level. (Patra et al. 2010)

#### 1.1.5 English as a subject and foreign language

According to National Curriculum, English is a compulsory subject from grade-I to XII among them grade-I to V one hundred marks, grade-VI to VIII (Junior School Certificate-JSC) 150 marks, grade IX to X (Secondary Education Certificate-SSC) and grade-XI to XII (Higher Secondary Certificate-HSC) 200 marks. In next paragraph, I discussed English as a foreign language teaching and learning with a few of citations.

Over the period, researchers have demonstrated that different ways of integrating the use of the computer into English as a Foreign Language (EFL) teaching have different effects on learning. Since the internet has a global reach and provides extensive international resources, teachers can access useful language resources for preparing materials for language classes. Teaching English is not only chalking and talking but making students communicate effectively. Along with the development of information and communication technology, the use of computers and internet has started to play an increasingly important role in education. In spite of this development, computer education for teachers faces significant challenges. “Computer has become an influential part of language teaching because of the rapid growth of technology” (Gardner and Miller, 1999, p.1). At present, “language teaching can hardly be done without the assistance of computer technology” (Jones, 2001, p. 360). Students expect computer among the available facilities of language courses and the teachers and administrators realize that computer-assisted language courses are more attractive than traditional language courses (Jones). Since the early 1960s, language teachers have witnessed dramatic changes in the form of language use and teaching (Kern and Warschauer, 2000). In Bangladesh, computer assisted language learning (CALL) is quite a familiar concept in some private schools of urban areas. But all the schools may not have the required infrastructures for computer assisted language learning (CALL) or even if they have their teachers may not have the knowledge and skills of using technology for language teaching. Bangladesh is now a developing country, so there is a lot of challenges in the field of computer-assisted language teaching in one hand, and there are some possibilities on the other side.

## 1.2 Rationale

Over the past several decades, studies analysing the relationship between computer and EFL learning have refined to focus on several critical issues, including motivation and governing the necessary skills. While computers have been popular among language teachers since 1960s, their usefulness has been amplified by the development of Internet-based technologies. With the emergence of CALL, Network-Based Language Teaching (NBLT) or teaching through online has also become popular where teaching involves the use of computers connected to one another in local or global networks (Kern and Warschauer, 2000). This form of teaching and learning is also known as “computer-mediated communication” (CMC) (Simpson, 2002). Educators recognize that utilizing computer technology and CALL programs can be convenient to create both independent and collaborative learning environments (Lai and Kritsonis, 2006). According to Warschauer et al. (2014), technology is increasingly a core component of teacher training courses for language teachers across all educational levels, in both the state and private sectors. Most language teaching positions now require knowledge of the theory and practice of learning technologies and digital literacy skills. However, successful implementation of any technology requires considerable effort by the teachers and administrators (Timucin, 2006). Jones (2001) believes that CALL cannot be regarded solely as a "self-access operation"; and commitment is very crucial for the successful execution of CALL. Warschauer (2000), however, have supported the use of technology despite some disadvantages for two reasons. Firstly, using computers for education is comparable to using books or print, and if there is no debate on the prior, discussion on using the latter is useless. Secondly, students need to learn the language of technology (e-mails, conducting web researchers) to survive in times awaiting them and so; technology has to be used "as a legitimate medium of communication in its own right". Therefore, the way to obtain a glimpse of the perceptions of benefit of Test of English Language Learning (TELL), CALL on students' language learning is to help teachers to clarify their goals, examine technology choices made by language teachers, observe and interview teachers and students while they are using computer to determine the strengths and weaknesses of its perceived effects.

### 1.3 Purpose of the study

The overall purpose is to study Computer-Assisted Language Learning at the Higher Secondary School in Bangladesh. The increasing need of CALL programme for more effective language teaching and learning classes, it encourages teachers and students to



experiment new methods and digital tools. Digital equipment as an innovative technology can increase the students' awareness regarding their own processes of knowledge construction and support their lifelong learning experiences.

#### 1.4 Objectives of the study

Research suggests that the integrated use of modern technology can yield positive results and lead to the improvement of learning. Learning English by using computer encourages students to learn the language, develops their ability to use the word, and helps them overcome the language barrier. So, objectives of this study are

- Objective-1 to focus on the various uses of technology that are adopted by teachers to enhance language skills,
- Objective-2 to define the challenges in using technology,
- Objective-3 to demonstrate the possibilities of technology enhancement of teaching English, and
- Objective-4 to provide a research-based guide to solve problems that are faced by students in using technology.

So far as I know, there is no such research work in existence anywhere- either at home or abroad, precisely on my proposed research work entitled "Computer-Assisted Language Learning at the Higher Secondary School (College) in Bangladesh." This research will help to understand the views of teachers and students about using a technology in EFL teaching and learning. As qualitative forms I did this research, it took the shape of a unique and vibrant way of study that, I consider, will serve as a source for the further investigations of all these types.

#### 1.5 Research Questions

1. How and to what extent do teachers and students to use technology in teaching and learning processes related to language learning in Bangladesh?
2. What are the challenges of computer-assisted language teaching and learning in Bangladesh?
3. What are the prospects of computer-assisted language teaching and learning in Bangladesh?

#### 1.6 Structure of the thesis

This study is arranged into seven chapters, beginning with the introductory chapter. The practical aim of the study resulted in a decision to organize the analysis around a theoretical

framework. The structure of the framework describes the implementation of Computer-Assisted Language Learning and Teaching with institutional and individual experiences.

Chapter 2 Background and Literature review

Chapter 3 Theoretical framework/Conceptual framework

Chapter 4 Research Methodology

Chapter 5 Findings.

Chapter 6 Discussion

Chapter 7 Summary and conclusion

IJSER

## 2. Background and Literature Review

Technology has become a vital part of this age, and people can hardly go without the assistance of modern inventions. Computer and other modern facilities already dominate education in developed countries, and the developing countries like Bangladesh are also heading towards that. However, while leading to technology enhanced education system, Bangladesh may face several challenges like lack of necessary equipment, trained teachers and so forth (Akhter, 2012). This research attempts to find out the present condition of computer-assisted language learning and teaching. As a part of that endeavour, some recent and past research findings have been accumulated in this chapter to analyse different aspects of computer-assisted language teaching and learning and some related e-tools for better understanding.

### 2.1 CALL and CALT

With the recent introduction of modern technologies, Computer Assisted Language Learning (CALL) has appeared as an attractive alternative to the traditional mode of teaching (Ehsani and Knodt, 1998). However, there is no widespread demarcation of CALL. Different academics illustrate it in their style. Leffa (2009) outlines CALL as,

A cultural artefact with the resource on its own including higher connectivity and interactivity. It integrates with other components in the learning community transforming the way teachers and students work and think. From this common perspective teaching and learning become a unified activity, distributed not only among the community members but also on the artefacts available in the environment (p. 40).

Beatty (2003) says that CALL as the process of using computers in learning which results learner's language development. Timucin (2006) states that Computer-assisted language learning involves the use of technology in the form of "computer and transformation process of the institutions where the changes take place" (p. 262). Computer-assisted language teaching (CALL) is the study of a function on the computer in language teaching and learning (Levy, 1997) and is now used routinely in a variety of instructional situations (Fotos & Browne, 2004). As a result, the teachers are increasingly essential to keep CALL skill that comprises both real-world skills and a thorough considerate of information technology (IT) theory. CALL authorises learners to control their speed of learning and interaction with others (Fotos & Browne). Jones and Fortescue (in Gunduz 2005) narrate that in CALL setting, a computer is a flexible classroom aid which can be used both by teachers and students inside or outside the classroom in a variety of ways. After analysing all these definitions, it can be

said that CALL is an approach to teaching and learning where computer and computer-based facilities are used to present, reinforce and assess materials to be learned and includes interactive elements.

Computers have been recycled for language schooling since the 1960s in the US. So, the history of Computer-Assisted Language Learning (CALL) can be roughly divided into three main stages: Structural /behaviouristic CALL, communicative CALL, and integrative CALL (Warschauer, 2000). Every step looks like a certain level of technology as well as a particular educational method. Computers have been recycled for language teaching for more than three decades (Gunduz, 2005). For this reason, CALL certainly needs to be looked in depth of its story to comprehend its development. Kern and Warschauer (2000) categorise the antiquity of CALL into three phases—behaviourist CALL, cognitive CALL and socio-cognitive CALL.

#### 2.1.1 Behaviorist CALL

The primary step of CALL programs, consisting of grammar and vocabulary tutorials and drills, return to America in 1960s when mainframe computers were in tendency (Kern and Warschauer, 2000, p. 8). At that time those programs were mentioned as Computer Assisted Instruction (CAI) (Gunduz, 2005). Bangs and Cantos (2004) state, the first CALL software was established in Stanford University, and some years later in 1968, the University of New York developed CALL software for German language. However, the most ambitious CALL project PLATO (Programmed Logic for Automated Teaching Operation) was propelled in the University of Illinois (Bangs and Cantos).



Figure 2: Early PLATO lab, 1975<sup>2</sup>

The 1970s witnessed a revolution of CALL as a result of development in research related to the use of computer for the scientific purpose (Gunduz, 2005). Between the 1960s and 1970s, the CALL programs were contained of repeated drilling on the same materials, positive and negative feedback and focused on accuracy that was consistent with behaviourist method (Kern and Warschauer, 2000). At that time behaviourist theory was occupied as the theoretical base of CALL and computers began to be considered not only as a technological help but also as an alternative to outdated teaching.

### 2.1.2 Cognitive and Communicative CALL

Throughout the 1980s, the behaviourist approach was banned by the defendants of Communicative Language Learning (CALL) and personal computers were also creating more excellent opportunities for particular work (Gunduz, 2005). Communicative CALL is based on a cognitive approach that learners build a new knowledge through exploring their surroundings employing their existing knowledge (Kern and Warschauer, 2000). The computer provided tools and resources, but it was up to the learners to do something in a computer-generated environment. The focus was not on what forms students learned from the computer but how they did use the forms while functioning on computers (Gunduz, 2005, p. 198). By the 1990s cognitive approaches began to be criticised, and socio-cognitive approach

---

<sup>2</sup> Source: <http://etec.cltl.ubc.ca/510wiki/File:PLATOlaboratory.jpg>

to CALL moved the importance from learners' interaction with computers to learners' interaction with each other via computers (Kern and Warschauer, 2000). Technologically there was a significant development in computer networking, and as a result, internet browsing, email communication, chat rooms, presentation and so forth become more popular among the teachers and students (Bangs and Cantos, 2004). This approach led teachers to use “the more learner-centred and interactive method in the authentic social context” (Gunduz, 2005, p. 199). Students learned and utilised various language skills in an integrative way and were enabled to use different computer tools for learning rather than visiting a computer lab once a week for quarantined exercise. Bax (2003) does not agree with the phases of Kern and Warschauer (2000) as he locates some flaws in the classification. So, he suggested renaming the stages to eradicate the confusions. He renames behaviourist CALL as restricted CALL, cognitive CALL as open CALL and integrative CALL as integrated CALL.

### 2.1.3 Socio-Cognitive CALL

Hjørland (2004) states that in traditional cognitive science, the role of culture and society in cognition is marginalized; Understanding personal cognitive focus on symbolic representations is not sufficient. This increased the importance of the semantic and pragmatic study to display how human and technological factors and organizational behaviours had been combined. With socio-cognitive methods to CALL we transport from learners' interaction with computers to communicate with other humans via the computer network. The basis for this new approach to CALL lies in both theoretical and technological developments. Cognitive and social resources are shared. Thus, Gadomski (2002) mentions that it becomes crucial to understand how cognitive properties of the mechanisms of the socio-cognitive systems and invariant social interrelations are networked to establish their behaviour. Theoretically, there has been the broader importance of meaningful interaction in authentic discourse societies. Technologically, there has been the growth of computer networking, which permits the computer to be used as a vehicle for cooperating human communication. Machines can play as mediation instruments that shape the ways we interact with the world (e.g., accessing and organizing data through databases, spreadsheets, and word processors). Word processors, for instance, facilitate the innovation, revision, and editing processes of writing, allowing rapid, easy (and reversible) reshaping of text. Gadomski (1997) narrated that systemic socio-cognitive metaphysics as focusing only on the observable (as well as by introspection) tasks of the human brain in cognitive and social relationships. Van Dijk (2009) defined that discourse as a socio-cognitive edge for the discursive communication of relations

between the mind and society. Hjørland (2004) further displays that socio-cognitive approaches stress the role of culturally produced signs and symbols and the way cultural, historical and socially created meanings mediate cognitive processes. Such an approach is beneficial for describing integrated cognitive and social possessions of systems, processes, functions, and models as well as socio-cognitive collaborations (Hemingway & Gough, 1998).

Furthermore, the socio-cognitive method, as an interdisciplinary perspective, presents the systematic relationship between fluctuations of the semantic group and the socio-demography of a community (Robinson, 2010). The purpose of programs based on this socio-cognitive approach was to permit the learner to restructure the original texts and, in the development, to grow their constructions of language. Computer networking tolerates a powerful extension of the computer-as-tool, in that it now enables access to other people as well as to info and data.

The computer can play numerous roles in language teaching and learning. It invented on the mainframe as a tutor that delivers language manoeuvres or skill rehearsal. With the advent of multimedia technology on the individual computer, it aids as a space in which to survey and creatively impact microworlds. And with the development of computer networks, it now assists as a medium of local and global communication and a basis of authentic materials. This diversity of roles has taken CALL far elsewhere the early "electronic workbook" variety of software that dominated the second and foreign language arena for years and has opened up new domains in foreign language teaching.

#### 2.1.4 Social constructivism

“Knowledge is profoundly a social activity” (Pritchard and Wollard, 2010, p. 34). This finding is based on Lev Vygotsky's (1978) theory of social constructivism (in Pritchard and Wollard, 2010) which states that human learners depend on social communication for stimulus, challenges and shared activity to promote thinking, engagement with the ideas and knowledge. Pritchard and Wollard (2010) determine three significant points from this theory. They are people around the learner have a central role in learning; they influence how learners see the world, and specific tools affect the way learning and intellectual development progress. Likewise, Randall and Thornton (2001) also agree with some essential concepts of the Vygotskian theory of learning. It is to be noticed that they connect this theory to teacher

education reflecting teachers as learners and teacher educators as a skilled individual. Their points are as follows-

Knowledge is constructed by interaction usually between a learner and a more specialist individual.

In the beginning, knowledge exists on an inter-psychological plane (in social interaction) and then it is transferred to an intra-psychological plane (in learners' mind).

Learning of new ideas or "appropriation" takes place when the new designs are moved from inter- to intra-psychological level.

For each learner (here, teachers), some concepts skills exist 'on the edge' of their knowledge which is known as their Zone of Proximal Development (ZPD). They can deal with these concepts or skills if they get help from more experts (like teacher educator or advisor).

The process of helping a student-teacher through ZPD and to "appropriate" a new concept is termed as scaffolding. The advisor can assist teachers in this process through discussion. (Randall and Thornton, 2001)

Beck and Kosnik (2006) think that social constructivism is an approach that can help deal with the challenges and tensions of teacher education since it encourages all the members of a learning community to present their ideas actively while remaining open to the others. Based on that, it can be assumed that the institution and authorities play an essential role in the development of teacher education. Clarke and Hollingsworth (in Geijsel et al., 2009) say that it is crucial to consider teachers as learners and institution as a learning community for teachers' development. Beck and Kosnik (2006) consider that teacher education is so crucial that authorities should give more time, resources and efforts to it to develop teachers' experience and professional skill. Constructing own knowledge is also important in social constructivism approach as no new knowledge can be learned without linking it to the existing knowledge (Dewey in Beck and Kosnik, 2006). Conversely, Geijsel et al. (2009, p. 410) believe that since social constructivism views learning as a process involving every member of a learning community, teachers' participation in decision making can add to the teachers' sense of "self-efficacy" and thus motivate their learning. The authors also mention that through psychological factors and background knowledge is vital for education, and the organizational organization also matters in the learning process.

Student-teacher should have time and encouragement to reflect on what they are learning (Beck and Kosnik, 2006). With backing and support, teachers begin to develop their teaching style that fits their individual need and talent. As an example of a teacher's construction of pedagogy, Beck and Kosnik also argue that teachers' approach to technology in education.



Their main points, the teachers who are comfortable with technology tend to make it central in their way of teaching whereas those who have a negative experience with technology pick discussion, reading and so forth as their primary teaching tool. They again mention that though it is necessary for the teachers to use technology as much as possible, "allowing differences to degree facilitates optimal teacher development and performance".

## 2.2 Necessity of CALL

Lai and Kritsonis (2006) mention that computer and the language program connected to it can deliver learners with more freedom than the outdated language classes. Lee (2000) positions that teachers should include the computer in the second language classroom as it can-

Motivate students better than the traditional method of teaching;

Enhance learners' accomplishment;

Rise authentic resources for study;

Inspire more significant interaction amid teachers, students and peers;

Stress individual needs;

Increase global understanding.

Lai and Kritsonis (2006) consider that a computer can provide learners with many fun games and communicative actions that decrease learners stress and anxiety. Through the communicative activities, computer-assisted language course can help assistance learners to improve their linguistic abilities, affect their attitude towards language learning and shape self-confidence as Robertson et al. (in Lai and Kritsonis, 2006) note that the learners of computer-assisted language programs have higher self-esteem rating than the regular students. Taylor and Gitsaki (2003) study that in a well-designed computer-assisted language program, the teachers can get necessary information regarding learners' development and provide feedback according to learners' necessity. Likewise, students can get authentic materials either at school or home, and these resources can be accessed 24 hours by connecting to the internet (Lai and Kritsonis, 2006). Introvert or quiet learners will be benefited from individualised technology-assisted learning, and academic learners can also work at their speed to attain a higher level (Lai and Kritsonis).

Warschauer (1996) argues that in late 1980s computer-assisted language programs started to become popular in the USA for teaching confirmation. The author considers that there are

some motivations that the teachers get from computer-assisted teaching including the desire to provide reliable communication partners, the acknowledgement of the importance of cultural exchange and "the aspiration to teach new learning skill to the language marginal students".

### 2.3 In-person interaction vs Computer-Mediated Communication

Computer-Mediated Communication (CMC) is an umbrella term which denotes to human communication via computers (Simpson, 2002). Piloting a study on 16 ESL students of a community college in Hawaii, Warschauer (1996) comes up with the following conclusions—

While in face to face conversation one or two students appear to dominate the floor CMC features more balanced contribution with each student sharing their thoughts equally students can explicit themselves comfortably and artistically during the electronic discussion;

They tend to use more proper and complex expressions in an electronic debate than they do in face to face argument. It may help them to obtain a more sophisticated communicative ability.

Japanese students hardly partake in face to face discussion whereas they participate more equally in an online debate. It emphasises the significance of students' cultural background.

The students who lack verbal fluency participate more in the online discussion.

The online discussions have few interactional features such as questioning, confirmation check, rephrasing and so on that are often found in face to face interaction. (Warschauer)

Pillettieri (2000) states that during chatting students feel less anxiety about participation and it stimulates to produce more of the target language. Chatting can also progress in sociolinguistic and interactive competence. Kern (in Pillettieri 2000) also says that in the electronic discussion, students use a wide variety of discourse buildings and the variety of verb form and clause type is more significant in an electronic debate than an oral debate. Pillettieri (2000) thinks that network-based communication (NBC) can perform an essential role in the development of analytical capability because in this medium of communication students have more time to practice and monitor the "interlanguage" (p. 83). He also says that synchronous NBC tasks should be goal-oriented, and they should be planned in such a way that all participants are necessitated to communicate with each other for successful completion of the assignment. However, Chun and Plass (2000) stress on the sociolinguistic phases of language as they imagine that by having the opportunity to communicate through a different medium, learners are challenged to process factual information beyond their grammatical and syntactic competence.

The students involved in synchronous communication, mainly online conversation, realise that they need to think and perform very quickly as they do in face to face interaction as Weininger and Shield (2001, p. 89) believe that CMC is "constrained by temporal limitations". Schewinhorst (2002) discovers the repetition of messages in synchronous communication though technically it is redundant since the previous notes are available on the screen. However, the author states that the redundancy may be used to get more time for decoding the last message. Formulaic languages are also used more frequently in CMC than face to face interaction to save time while typing (Levy, 2008, p. 7). To confirm active CALL, the teachers need to preserve a balance of approaches, resources and tools to encounter the needs of learners in a particular context (Levy). To accomplish that balance the instructors has to know how to organise technological resources and how they can combine them with face to face to teacher-student and student-student interaction (Levy). In this regard, Sotillo (2000) can be cited,

In the hands of professors who know what they are doing, online instruction is superior to face to face interaction. It appears that synchronous electronic discussion is more efficient in terms of time on task than ordinary classroom discourse and that the decrease in teacher domination of studies creates more opportunities for the production of more complex language (p. 83).

However, Levy (2008) considers that broad claim about the advantage of CALL should be examined with some "scepticism" because of the difficulty of language and language learning and variety of students and learning strategies (p. 2). Compared to synchronous communication there have been fewer studies on an asynchronous interface that is probably because of the confounding variables (Levy, 2008). Amid the few reviews, Sottilo (2000, p. 104) studies that students tend to focus on accuracy and form in asynchronous communication whereas they only concentrate on meaning and fluency in synchronous communication, but still many grammatical and spelling errors are found in asynchronous communication. Sottilo's (2000) study finishes that synchronous and asynchronous communication influence learners' attention differently and affects both language learning and production.

## 2.4 Self-access centre

A self-access centre (SAC) is not just a collection of materials; in its place, it combines several learning elements that deliver learners with a different kind of learning environment. Self-access language learning is a method to education, not an approach to teaching (Gardner and Miller, 1999). Self-access centre can benefit all types of language learners as it is not

culture-specific or age-specific (Gardner and Miller). Self-access centre is a powerful tool to increase learners' capacity of independent and lifelong learning (Miller et al., 2007). Gardner and Miller also uncovered in a report that learners were very confident about the benefits of the self-access centre. Malcolm (2004) considers that effective coordination among SAC administrators, staffs, instructors and students is vital. So, he proposes that students can be actively involved to establish and maintain SAC in several ways like managing resources, providing input in material designing to make it suitable for their context and so on.

Institutions' attitude is essential to establish a self-access centre. In a highly structured institution, the introduction of a self-access centre needs to be included in their policy (Jones, 2001). The institutional influence becomes more significant where funding is required for a self-access centre (Jones). Teachers and other decision-makers need to have time to learn about how self-access centre can be used in language teaching and to replicate on how it might work best in their context (Miller et al., 2007).

Gardner and Miller (1999) postulate that a self-access centre can be of three types based on its structure of support. They are structured (complete guidance is given to learners on how to enter the system and how to move through it), semi-structured (learners choose their materials and skills to work on, but they can ask for guidance if they need) and unstructured (learners have to decide on their learning and monitor their progress). Nevertheless, SAC cannot replace a teacher (Jones, 2001). In its place, it generates new and vital roles for teachers which they need to adopt or adapt.

No self-access system is better than any other. It is modified to suit the context where it occurs. So, what works well for one group might not be appropriate for another group (Gardner and Miller, 1999). They propose different types of self-access system with new names like Telephone sales, Mobile shop, Market stall, Bring and buy sale, Postal sales, Boutique, Video-rental shop, Technology shop and many more (p.58). Amongst them, "Telephone sales" is such a system where learners interaction their teachers by telephone or email and get access to resources through their computer and internet, and it is suitable for students.

## 2.5 Blog

Eastment (2005) says that blogs are just online diaries where an individual can write their thoughts, reflection or whatever they choose with an option for the readers to post comments. Bella (2005) states that weblog or blog is a website that can be created and updated quickly, and people can publish in blog instantly without having any knowledge of HTML (Hyper Text Markup Language) programming. For making the simple definition, Barlett-Bragg (2003) postulates that a blog as a collection of entries usually written by a single author and presented in reverse chronological order. Weblog entries are made by typing directly into the browser and all type of formatting like spacing, italic, bold, underline creating link can be done without any knowledge of HTML or FTP (File Transfer Protocol) so that anyone who can type, copy and paste can build and maintain a blog (Campbell, 2003; Godwin-Jones, 2003). Possibly, the incredible growth of blogs can be attributed to the simplicity of creating and maintaining a blog (Barlett-Bragg, 2003). The accumulation of writings and other contents in a blog generate a record of learning and resource for others (Campbell, 2003). A weblog is very interactive as readers can post comments on any given entries and threaded discussion can take place if the chosen software supports (Campbell). By way of a limitation of a weblog, Godwin-Jones (2003) argues that entrances are accessible in chronological order but not in the order of content (p. 14). Campbell (2003) mentions that the following three uses of weblogs that can be utilised for learning outside the classroom. In the next three paragraph, I discussed three types of blog.

**The Tutor Blog:** It can perform three functions. Firstly, learners and parents can find information about course outline, assessment, homework, due dates of assignments etc. in tutor blog. Secondly, it can be used as a portal where the teacher can post different materials and websites for learners' self-study. It may also foster learner autonomy. Thirdly, the blog can be used to give voice to someone's feelings and thoughts. The students can post their comments regarding any classroom activity. Thus, the teacher can also keep track of the students' improvement in writing.

**The Learner Blog:** Individual learners or groups of learners can run this blog. Learner blog may be best suited for reading and writing classes. A typical reading assignment can be followed by comments of all the learners where the students get writing practice.

The Class Blog: It is a joint effort between the teacher and students. It can be an open space for students to express their thoughts about any classroom activities. Class blogs may be useful for project-based language learning where learners are allowed to advance research and writing skills by being asked to generate an online source for others. It also can be as a virtual classroom for international students where the students from different countries will get access and publishing rights in this blog.

Soares (2008) postulates that the learner blog as a personal library where students will get reference materials, books and many more for further study (p. 518). She also argues that since learners' written works get published in the blog, it makes them more concerned about their writing. She also mentions that the learner blog can be used as an online portfolio of where students can go back to their previous work and measure their continuous progress during a writing course. About learner blog, Barlett-Bragg (2003) says that since the content become the sole responsibility of the learners, it may lead learners to deep-learning.

Stanely (in Soares, 2008, p. 520) believes that class blog is best used as an "extra-curricular extension of the classroom" that encourages the learners to think in depth about the topics discussed in a classroom. Soares (2008, p. 520) thinks that the best advantage of using a blog in the language classroom is that several groups of learners can interact with each other all over the world through blogging. The interaction not only engages authentic use of target language but also sharing of culture, thoughts, feelings and values that brand the learning more concrete and enjoyable (Soares). Kavaliauskiene et al. (2006) locate that using a blog in EFL writing class makes the learners feel that their writing is not only for the classmates or teachers but for the whole world and thus it raises their language awareness (p. 221). They directed their study on the first-year students of Mykolas Romeris University who were learning English for a specific purpose. From their research Kavaliauskiene et al. (2006) observe the following issues,

A blog allows learners to learn at their own pace and it overcomes their fear of making errors and enhances self-esteem.

It can increase learners' motivation because of their novelty and diversity.

Students get feedback not only from their teachers but also from the other readers of the blogs.

In a blog, learners can go back to their past performance and compare it with their present works. Thus, they can measure their improvement. (p.227)

Horvath (2009) recognises blog as a way of developing community bonding and individual autonomy in reading and writing courses at the tertiary level (p. 8). Godwin-Jones (2003) considers that a blog can be productive for project-based language learning (p.14).

## 2.6 Podcast

The word "podcast" is originated from the term "pod" (acronym of Personal On Demand) and "broadcast" (Smythe and Neufeld, 2010, p. 488). Pozzobon (2008) defines 'podcast' as regular audio or video program that is accessible via the internet and can be downloaded to a computer or personal devices so that the user can view or listen to it anytime (p. 112). Though, Smythe and Neufeld (2010) tell a little more technical definition of the podcast. They say that a podcast is one of the webs 2.0 digital social networking tools (like blogs, Facebook, and Youtube) that provide a platform for the user-generated content, often by means portable media players like iPod or MP3 players. Though many institutions have banned these accessories since they cause distraction among the students, students outside the schools are "infused" with this technology (Lee, McLoughlin and Chan, 2007). Therefore, using these applications in the classroom may inspire learners to be involved in learning new things. A podcast can be in finding several websites like BBC or on specialised software like Apple's iTunes (Pozzobon, 2008). One of the main attractions of a podcast is that learners can create their podcast (individually or collaboratively) to reach the authentic audience (Smythe and Neufeld, 2010, p. 489). It does not require in-depth knowledge in technology, and the product is reusable, portable and keeps learners engaged in a creative learning process for an extended time (Lee, McLoughlin and Chan, 2007).

A podcast can be of unique types as Stanely (in Pozzobon, 2008, p.113) comes up with three types of podcasts: official podcast (created for general people), teacher podcast (created by teachers to help students) and students podcast (produced by students often with the help of teachers). It is well-defined from this report that teachers can not only create their podcast but also engage the students in producing them that conform to Erben, Ban and Castaneda's (2009, p. 18) third principle of "creating effective second language learning environment" that urge to give learners classroom time to use their English productively. With this tool, teachers can ensure that their students are listening to authentic content at least for a period that will help them to attain a level of proficiency (Pozzobon, 2008, p. 113). Moreover, the podcast does not confine the students to passive listening; instead, it makes them participate actively

in producing (Pozzobon). Dudency and Hockly (2007) define that the teachers can record their class lecture and publish them on the university website for the students who miss those classes.

### 2.6.1 How to create and use podcast

Smythe and Neufeld (2010) states that software named GarageBand that is widely used to create a podcast on Apple computer. Using this software, the students can control the sound effect and music of their podcast. Chartrand and Pellowe (2007) make two podcasts with the help of their pupils following the steps mentioned below,

At first, they brainstormed about some crucial points like the level of the targeted learners, the number of episodes of the podcast, the kind of conversation and so forth. Secondly, they scripted conversation for the students of beginner and intermediate level.

Also, they use an Apple computer (iMacG5), an Edirol UA-3FX USB audio capture unit and an Audio Technical microphone to record the conversations.

Last but not least, for editing and mixing the recordings, they use GarageBand 3, iTunes 7 and SoundStudio 3 software.

Finally, they modified the pace of dialogues based on the learners' level. For beginner level, they included a slow-paced version of the conversations whereas for the intermediate level they use a faster release and the dialogues tended to be longer. (Pellowe)

Conversely, there are only a few websites where one can upload their podcast free of cost. Since podcast needs a vast memory because of the audio or video files, most of the websites charge for disk space and storage usage (Pozzobon, 2008). Pozzobon says that the site called Podbean that proposals the opportunity of creating, listening and subscribing to a podcast without any cost. It is to be distinguished that the users can use only 100MB space free of value on this website.

## 2.7 Facebook in language teaching

Social networking websites are a new form of CMC. Knobel et al. (1998) mention that computer-based learning is not just the simple existence of hardware and software; in its place, it requires the "coming together" of people in learning mediated by the network. Nowadays, Knobel's learning network has engaged in the form of Social Networking Communities (SNC) (Blattner and Fiori, 2009, p. 19). Blattner and Fiori state that Facebook is the fastest growing and best-known site on the internet that has more than 100 million members. Veer (2010, p. 158) positions Facebook as a "hip, hot and happening site" where members can "witness" each other's life by viewing and sharing abundant quantities of



information. Blattner and Fiori (2009, p. 19) say Facebook to be more "sophisticated" than many other SNCs like MySpace, Friendster, Blackboard, WebCT, Angel and many more. Blattner and Fiori (2009) think that Facebook can be a powerful learning tool since it allows its user to experience various patterns of interaction. To explain, Veer (2010, p. 65) notes that in Facebook people can duplicate different types of real-life conversation as they can poke a friend, give a virtual hi or hello, write on somebody's wall and send cyber-gifts. Facebook offers several forums for students where they can find a job, roommate or even textbook (Blattner and Fiori, 2009). Students or instructor can build a link for any particular course and request other students to join that link, which allows them to collaborate and exchange knowledge outside the classroom. The instructor can post many important notices like time and place of next class, discussion topic, deadline of assignment, email address, office hour and many more. Joining any group is an exciting and favourite feature of Facebook (Blattner and Fiori, 2009). Veer (2010) notices that this feature can be used for a language classroom to promote constructive thinking.

Contemporary surveys have revealed that Facebook can have a positive impact on student-to-student and student-to-teacher relationship (Mazer et al., 2007). Mazer and his colleagues (2007) have discovered that by accessing social networking websites, learners can find a common interest with the peers and instructors that lead to a comfortable interaction and learning environment. O'Sullivan (2004) and his co-authors come up that the students who have access to instructors' web page containing "self-disclosed" information have a high level of motivation and develop a positive attitude towards the course and teacher. Therefore, it can be believed that SNC like Facebook can be an effective tool to shape up a community among the students and teachers. Undoubtedly, for this reason, Blattner and Fiori (2009, p. 21) believe that recognition of the academic opportunities that an SNC offers is important both for students and teachers. Instructors need to comprehend that Facebook is an important part of students daily "e-routine"; so, if a teacher can use it for providing guidance "it will be an invaluable advantage to their educational and social experience" (Blattner and Fiori). Facebook can also grow up with learners' pragmatic competence (Blattner and Fiori, 2009, p. 22). Pragmatic competence incorporates the knowledge of speech act and the ability to use a language properly in a specific context (Eslami-Rasekh, 2005). It is a key aspect of language learning. Kasper and Rose (2003) further explained this definition by adding that "pragmatics deals with the way speakers and writers accomplish goals as social actors who respect social norms to attain interpersonal relationships with interlocutors". Facebook permits its users to

execute meaningful interaction with the speakers of their native language as well as of other words that give them access to practical information on various topics (Blattener and Fiori, 2009). Accordingly, Facebook can be measured as an innovative tool to develop learners' socio-pragmatic awareness and competence in a second or foreign language. The authors stress on Facebook groups that provide learners with the opportunity to experience constant and reliable communication through a discussion forum. Kasper and Rose (2003) also coincide with them and recommend that learners can use their observation power as a tool to understand the real-world practices of any community on Facebook.

## 2.8 Other tools of language learning

There are some other tools of language learning like email (2.8.1), skype (2.8.2), listserv (2.8.3), wiki (2.8.4) which can help to learn English as a foreign language.

### 2.8.1 E-mail

Email stances for electronic mail that allows users to exchange electronic messages and computer files from one computer to others (Erban et al., 2009). Like a pen-pal, students can have key-pal with who they can interchange email. Nagel (1999) points out, exchanging email among the students of a classroom stimulates them to participate, and it does not necessitate to be very expert in using a computer.

### 2.8.2 Skype

Skype is a communication means that allows users to make audio and video calls over the internet and also to a landline (Eaton, 2010). Calls to other Skype users are without any charge and perhaps for this reason, in the mid of 2010, Skype had more than 124 million users who made 95 billion calls, of which almost 40% were video call. If a computer is connected to a large screen or projector, Skype can be used to educate a large class where the teachers and students might not be at the same place (Eaton).

### 2.8.3 Listserv

Listserv allows a group of people with a common interest to join and partake in an organised and moderated email discussion group (Earban et al., 2009). Teachers can use already existing listserv, or they can form a personalised and closed listserv for their class or group. Learners

can exercise English in this discussion forum on many topics, such as English grammar, conversational English, English idioms, and varieties of English and so on (Erban).

#### 2.8.4 Wiki

Wiki is a cooperative website that can help students to advance their writing skill (Holtman, 2009, p. 30; Erban et al., 2009, p. 122). The term Wiki is created from the Hawaiian language which means "quick" (Erban et al., 2009). It allows members to post new writings and edit the existing posts (Holtman, 2009). Consequently, the teachers can check students writing and provide feedback in Wiki (Holtman).

### 2.9 The virtual world: Distance education

With the progression of technology, learning has become such an endeavour where the location is fewer important and perhaps for this reason distance education has become popular in the kingdom of education. Davey (in Carter and Elseth, 2009, p. 444) outlines that distance learning as a formal educational process that happens with the teachers and students separated by time and distance. Wilson (in Carter and Elseth, 2009, p. 444) postulates that "distance learning is an educational approach that integrates technology, connectivity, curricular content and human resources" to teach student outside of a traditional classroom. Learning is no longer restricted to four boundaries of a building but can take place anywhere and anytime, facilitated by digital information and communication technology (Kluge and Riley, 2008, p. 128). The advent of online 3D virtual worlds poses many exciting opportunities and challenges for teachers. Gesche (2009, p. 525) terms this 3-D world as "Virtual Third Space", originally coined from Bhabha (in Gesche, 2009, p. 526). He also says, it is such a space where people can "construct, reconstruct and negotiate identity" and the identity is provisional rather than fixed. Kluge and Riley (2008, p. 128) have cited the virtual world as "Metaverses" where inhabitants can design their avatar, create their environment and function in a way that resembles the real world. The acceptance of the virtual world is increasing day by day. Linden Lab's "Second Life" (SL), one of the leading virtual worlds, has grown from 230,000 consumers in 2006 to 8.5 million in 2007 and it has been predicted that 80% of the active internet users will take part in the virtual world by the end of 2011 (Kluge and Riley, 2008). Now people do not only interact in SL but also trade there with "Linden dollar", and they can buy an island, house, office space and many more within the world itself (Coffman and Klinger, 2007). The language learners cannot get a real-life environment to practice their

target language but virtual worlds like Second Life can deliver learners with that platform (Sherblom et al., 2009). Gesche (2009) thinks that virtual learning communities have become famous for several reasons such as—providing a new platform for language learning; creating an exciting "trans-cultural communicative space"; facilitating inter-cultural communication and providing opportunities for real-world interaction. Broadribb et al. (2009), Kluge and Riley (2008) and Coffman and Klinger (2007) consider the opportunities and significance of virtual world in education,

The virtual atmosphere has the potential to immerse the learners in the learning process fully.

It allows learners from diverse places to collaborate on the same topic and learners can use their imagination and creativity to perform any particular duty.

In a virtual world, the educator can make the learners for the complex and interconnected global society.

In a distance education program, novices can have a sense of participating in a classroom through the virtual world.

Carter and Elseth (2009) believe that learners get more engaged in Second Life because they not only can mimic real-life actions but also can do a lot more that is not imaginable in a real setting like flying without any transportation, visiting museums, the gothic cathedral, dangerous and new places and what not. They further opinion that while visiting these places learners meet and talk with people who exist in the real world and it motivates a factual situation to converse. Despite having much potential, using a virtual world for education is challenging both from a student's and teacher's viewpoint. Participation in the virtual world requires learners to have vigorous knowledge of computer and internet (Kluge and Riley, 2008, p. 131). Teachers and parents often frown at Second Life since they think it only as an online game (Carter and Elseth, 2009). There is a shortage of competent and trained teachers who can plan and coach courses in virtual space (Swertz et al., 2009). Gesche (2009) also says that planning language class for virtual setting needs careful preparation both in technical level and personal level. Sherblom et al. (2009) discover that both teachers and students experience numerous challenges in a virtual world like gaining access, managing internet and Second Life commotion, coping with computer problems and so on. Cost is another challenge for the implementation of virtual world education. It necessitates a high-speed net connection with modern computers (Kluge and Riley, 2008). In Second Life, though the primary account is free, it costs \$9.99 per month to produce any educational presence (Kluge and Riley). Burden issues are still at a question in the virtual world (Bugeja, 2008). Many illegal acts like virtual violence, harassment, and assault take place in Second Life, and the issue of whether a

teacher will be responsible for that do not need to be resolved (Bugeza). Moreover, some students may find the world so exciting that they may get distracted from the educational purpose (Kluge and Riley).

## 2.10 E-learning and distance education perspectives

E-learning or electronic learning means a technology-driven learning system where all the learning and teaching activities are carried out via a network and electronic devices (Patra et al., 2010). In Bangladesh, there are a few studies on e-learning context, and the existing studies focus basically on general learning and teaching, not on language teaching. On the viewpoint of Islam and Selim (2006a), e-learning was first introduced in Bangladesh in 1956 via radio-broadcast, and it was expanded by Bangladesh Open University (BOU) in 1992. Nevertheless, it has been quite a long time, and it is still far behind in terms of using modern ICT (Islam and Selim, 2006b). They (BOU) mainly deliver their lessons via television and radio but if they make these lessons available online students can access them anytime from anywhere (Andersson, 2008). Though, Bangladesh is now connected to "the information super-highway" through submarine cables which will add a new dimension in the expansion of e-learning in Bangladesh (Islam and Selim, 2006b). But, e-learning poses both prospects and challenges for developing countries like Bangladesh (Islam and Selim, 2006a).

### 2.10.1 Scenarios of e-learning for Bangladesh

Patra et al. (2010) mention the following benefits of e-learning in the Bangladeshi context,

In a country of more than 140 million populations, it is not imaginable for the Bangladesh government to make infrastructure to admit all the students. By initiating e-learning program, a small number of institutions can provide education to a large number of students.

Bangladesh government has announced to build ICT based digital Bangladesh and e-learning is a crucial part of that goal.

E-learning is very cost effective since it does not require any classroom and students also do not need to come to class or purchase reading materials. All the reading materials can be provided through the internet.

Online registration and advising save time both for the students and teachers. Many schools and universities have started to perform the formalities of filing online.

E-learning provides self-learning opportunities for the students, and they can continue working beside their study.

Akbar (2005) mentions that the demand for higher education is increasing, but many students drop out after their higher secondary school due to various reasons like poor socioeconomic

condition, a shortage of universities in many areas and so forth. He thinks that e-learning can meet the demand for higher education and better learning materials of these students ensuring quality output.

### 2.10.2 Challenges for Bangladesh in E-learning

E-learning is till now a new concept for the Bangladeshi learners (Akbar, 2005). To present the e-learning education system, numerous challenges need to be faced. For example, Akbar (2005) says about the unavailability of computer and internet connection. His viewpoint, except the urban areas, computer and internet connection is not accessible for ordinary people in many areas. Islam and Selim (2006a) also think so on that point. They find out from their study that the poor socio-economic condition of Bangladeshi might suggest an enormous challenge for the implementation of e-learning. Andersson (2008) remarks an educational setting as an impediment to the execution of e-learning. She reports her study on two developing countries—Bangladesh and Sri Lanka where she realises that the students in developing countries are used to an authoritarian classroom setting. In such a situation, initiating e-learning courses will be very challenging, and the challenge for students is not only about technology but also about the construction of the educational setting. She also comes up a lack of flexibility in the curricula, learners' lack of responsibility for their learning, time management and indifference of the administration to be responsible for the failure of e-learning program in Bangladesh. Akbar (2005) thinks that local authorities are yet to accept e-learning facilities in Bangladeshi framework. Thus, he advises that with high technology, a user-friendly environment is also necessary for the success of e-learning. Andersson (2008) finds out that a lack of trained teachers to conduct e-learning courses is another problem to be considered. Moreover, Akbar (2005) highlights that most of the materials used for e-learning are developed in the western context. Accordingly, developing local materials that apply to Bengali language and culture is very significant to implement e-learning.

### 2.11 Teacher training on CALL

Teachers may require designing, implement and evaluate a CALL activity. Therefore, it is becoming vital for the teachers to be familiar with CALL opportunities inside and outside the classrooms (Jones, 2001, p. 361; Fotos and Browne, 2004, p. 3). Jones (2001, p. 362) consider that technology and computer cannot replace teachers; instead, it assigns teachers different

new roles like a facilitator, organiser, guide, material designer, monitor and so forth. Thus, consistent with him training on CALL is necessary for the language teachers to play these roles appropriately. Various types of research (for example, Kessler, 2006, p. 22) propose that there is scarcely any formal course or program to assist the teachers who are interested in CALL. Accordingly, they avoid using technology in their classroom and those who are very enthusiastic attend seminars, workshops and conferences to satisfy their enthusiasm by questioning or discussing with the more experienced people (Kessler, 2006, p. 24). Kessler (2006, p. 24) thinks that the "formal language teacher preparation programs" neglect to prepare their graduates with the knowledge of technology. Levy (1997) advocates ongoing supports to appreciate and implement CALL effectively.

However, there is broad backing for teachers to use technology; the question is what type of training is necessary for the teachers. Some colleges of education have already combined necessary computer skills such as keyboarding, mouse skill, working with menus and sub-menus in their courses (NCATE, 2008). Knowledge of different electronic communication like email, discussion board and file sharing are essential to collaborating with students and colleagues (Kessler, 2006). Fotos and Browne (2004) stress on the use of internet and CMC for today's academic environment. Likewise, Hirvela (2006, p. 234) also emphasised CMC to be integrated into teacher training as it promotes collaboration and at the same time produces an archive of valuable comments and opinion that teachers or teacher educators can access anytime from anywhere for further clarification. Son (2002) emphasis to more sophisticated skills like video teleconferencing, chatting, developing web-based materials, blogs and other forums that enhance not only classroom learning but also distance learning. Green and Tanner (2005) also inspire distance teacher education program because it allows the trainees to use their "multiple intelligence". Ebsworth et al. (2004) have a different understanding of teacher education. They used only videotapes for their training program, and they get a positive response from the teachers. In their application, in addition to advisors' feedback, the trainees get self- feedback when they watch their videotapes, and they not only enjoy it but also review their language use. Conversely, Daud (in Kessler, 2006) advises teachers not to expect that technology will handle all their teaching problems. Egbart et al. (2002) find out that teachers often cannot use technology in spite of having knowledge and training on CALL because of some obstacles. Accordingly, the main impediments are time, curricula and administrative restriction, and insufficient resources. Therefore, it can be assumed that in addition to teacher training, hardware, software, technical assistance, curricula and

administrative support and, last but the least, emotional support are the resources required for the implementation of CALL (Egbert, 2002). Jones (2001:365) notices that administrative and classroom duties prevent teachers from being enthusiast about training on CALL and even if they are provided with training, they may not find enough time to put their new knowledge into practice. He further mentions that if CALL teachers enhance a curriculum may feel interested in it.

#### 2.11.1 Teacher training in Bangladesh

Teachers are, in a broad sense, learners because they learn twice—once for themselves and again for students (Khan, 2005). Although in recent time, teacher training has got the consideration, it is still a significant problem area in Bangladesh. Rahman (1998) says that exercise is obligatory only at the secondary level. There is no pre-service training for the teachers of primary, higher-secondary and tertiary levels. Sultana (2005) uncovers in her report that only 36% of the teachers of higher secondary schools have training on teaching, but further inquiry shows that they have a wrong conception of teacher training. They believe seminar, workshop and conferences as training. Quader (2005) mentions that teachers at college, degree and master's levels under the National University undergo training of three months before going into the classroom, but the practice is neither extensive nor intensive. However, he thinks that life is becoming very competitive in the present world and this competitive world, teachers need to be trained so that they can carry out their work correctly. Likewise, Sultana (2005) says that compared to public schools, private schools give more importance on teacher development, but still, constant changing of the workplace on the part of teachers and continuous replacement of teachers by the authorities show that none of the parties is satisfied with the present situation. So, her opinions are teachers take control of their development to cope with the "complex, competitive and ever-changing world of teaching". She especially desires the private schools to launch and support teacher training programs that will maintain the quality of education leading to the growth of schools. She further mentions in her article that besides providing training, the schools also should arrange seminars, conferences and workshop for teachers' and also students' betterment.

The review of the literature on Computer-Assisted Language Teaching discloses most of the studies in this field were conducted in the Western countries where English is the first language, on the other hand very few researches were conducted in countries where English is foreign language mainly in Bangladesh (Afrin, 2014, p. 70). The researcher analyses some of



the most related studies on the topic of this research. Dashtestani (2012) did a study on Iranian EFL teachers "perspectives on CALL, where he found out the attendees had positive attitudes toward the use of CALL in EFL courses. Teachers believe that CALL is beneficial to increasing students' motivation, autonomy, self-confidence, and learning multicultural competence. In addition to that CALL is considered as relevant, facilitative, interactive, and time and energy efficient in EFL teaching (p. 60).

Park & Son (2009) mention that, teachers of CALL have positive and approving attitudes toward the use of computers in the classroom. They think the machine is that kind of technology which helps to teach students and they get help in various ways. From the use of a piece of equipment, students will have learning experiences in real and authentic contexts. Atkins and Vasu (2000) believe that teachers are more conscious of the use of computers in the classroom. They think computers play a significant role in EFL learners.

On the other hand, Lam (2000) also states that teachers have interest in using computers and have personal beliefs of the advantages of using equipment in the classroom which also help teachers to decide using technology. Kim (2008) also find out those teachers "beliefs about language teaching and learning. The teacher's ideas about language teaching and learning affected their perceptions and expectations of computers as well. Teachers do not believe computers can develop all the four skills equally. They expect using the internet and multimedia through a machine which help students reading comprehension" (p. 251).

Karl (2011) narrates the significance of using technology in the classroom. She points out a difference between the learning from and learning with an approach which is seen very clearly in the philosophy of technology education versus educational technology. From her point of view, she says that technology education is based on that technology is where the primary focus is on computer science courses and computer programming. The technology is the tool to acquire more knowledge about a specific subject, the educational technology shifts to achieve cognition and higher order of thinking instead of drill-and-practice of necessary skills (p. 21). Reeves (1998) says that "learning from media and technology, the student becomes the tutee and the technology is the tutor" (p. 2). So, his thought is that the approach is tutoring students on drill and practice skills and delivering immediate feedback on student performance. The educational technology contains various content areas which are taught in school and uses technology to support learning in these different areas (Reeves, 1998, p. 2). Karl (2011) assertions some positive stances of the overall implementation of technology-

based education in the classroom. From her point, she argues that researchers thought are positive. While the study progressed, student's learning tasks did not change dramatically, but the researchers observed other significant changes. These changes are as follows:

- Teachers began working in teams and across disciplines
- Classrooms became a mix of traditional and constructivist instruction
- Students became more collaborative.
- Teachers altered daily schedules to allow more time for student projects
- Teachers began to use alternative forms of assessment such as performance and portfolio based
- Technology encouraged a student-centered environment and cooperative learning
- Teachers often used more complex tasks and materials in their instruction, and
- Teachers realised that teaching and learning with technology occur over time (p. 24).

Warschauer (2002) finds out that the use of technology in the classroom. He has done an ethnographic study with language learners in Hawaii-including immigrants, international students, and native Hawaiians. It denotes that the participants view technology not as a secondary, optional tool but as a critical added value to language education. In other words, students in technology-intensive language classrooms learn both language skills and valuable information literacy simultaneously (p. 455). Seileek (2004) examined the effectiveness of two mediated techniques – cooperative and collective learning – designed for teaching and learning oral skills, listening and speaking. He also observed that students' attitudes toward using a CALL approach and techniques for teaching oral skills. The findings of the study find out that the cooperative computer-mediated technique is a practical method for learning and teaching oral skills."

### 3. Theoretical Framework and Conceptual Framework

#### 3.1 Theoretical Framework

The Computer-Assisted Language Learning theoretical framework, which discovers the detailed findings that support this research, can be assembled based on the following justifications:

Many ways can lead to Computer Assisted Language Learning (CALL). In one scenario, a computer-literate parent may discover a pleasant reward and mistreatment system with sirens and melodies by which to inspire a teenager to learn whatever the parent could get from the computer, maybe even a foreign language: thus, the foundation legend of the Transparent Language. In another scenario, a perceptive language and literature professor might have observed instructional software in another field, say, economics, and recognized its applicability to the language learning enterprise. Others may have commenced in the kingdom of testing and evaluation, first on paper and face-to-face but in due course also by computer adaptive means. And a whole other cadre of experts founded their credentials in Linguistics and Philology before stumbling upon a network and applying their talent to CALL. It does not need the pioneering talent of a century ago to obtain or progress someone else's theory of language learning. In broad strokes, most approaches can be embodied in a field limited by Pavlov's dog, salivating to the sound of a bell, "structuralism," "generative grammar theory," the "natural method," "parallel distributed processing" (PDP), and "Cognitive Theory".

##### 3.1.1 Behaviorist theory

The aged and most potent of modern learning theories inevitably went back to Pavlov and was methodized for twentieth-century audiences by B.F. Skinner (1904-1990). The "behaviourist" mode starts with the empiricist axiom that all psychological data should be limited to that which is observable. On that base, the idea upholds that human and animal learning closely look like one another. To begin with, the mind of the human child is not a tabula rasa (blank slate). There pre-exist certain functions for every action they do other than suckling. And it is as difficult and complimentary as the use of language. Then learning of language, just like anything else, can be adept by experience, specifically by orders of stimulus and response. "Conditioning" is the automatic production of a proper or expected response upon any given stimulus. It is the concern of extensive experience in which the relations between stimulus and response are encouraged and reinforced. Learning comprises

in the cultivation of these relations. Language is nothing more than an ostentatious response mechanism established through years of conditioning across critical periods in human growth. Having studied the above theories affecting this research, it can be inferred that CALL can be used into two distinct phases (Warschauer, 1996): Behaviourist and Social Constructivism or Development Theory. In the next subsection (3.1.1), I discussed Behaviorist theory and subsection 3.1.2 Social Constructivism Theory.

“Behaviorism was, and is, a moment primarily in American psychology that rejected consciousness as psychology’s subject matter and replaced it with behavior” (Leahey, 2000, p. 686). Behaviorism associates learning with behaviors that can be observed and measured, reinforcement is key to successful transfer through behavioristic learning, and strong emphasis on the stimulus, the response and the relationship between them (Danley, James, Mims & Simms, 2014). They show it in figure:



Figure 3: The definition of Behaviorism<sup>3</sup>

Behaviorism was established in the 1880s and lasts to evolve in the twentieth-first century and beyond. Although behaviorism has been severely studied, behaviorists stay to have difficulty agreeing on a definition for behaviorism and identifying who were the true behaviorists (Mills, 1998). The publication of *The Behavioral Learning Theory* by Watson in 1913 was responsible for the movement towards behaviorism and away from functionalism. This publication was a study of the relationship between organisms and their environment (Overskeid, 2008). Most psychologists have agreed that psychology is the study of human behavior, the only scientists that consider themselves behaviorists today are those who are followers of Skinner (Leahey, 2000). “The behaviorism of Watson and Skinner is based on a positivistic approach to science, that is, a reductionist view in which all that can be addressed is the relation between sensory stimuli and the unique corresponding response” (Webb, 2007, p. 1086). However, Skinner eventually came to the realization that human beings go beyond

<sup>3</sup> [http://faculty.mercer.edu/codone\\_s/tco363/2014/behaviorism.pdf](http://faculty.mercer.edu/codone_s/tco363/2014/behaviorism.pdf)

just responding to the environment. He found that they also react to the environment based on prior experiences (\*Skinner, 1974). Rotfeld (2007) suggested that “psychologists ‘invented’ behaviorism itself as a basis for theoretical explanations, prediction, and testing” (p. 376). From its inception, the term behaviorism provided a “direction for social science research that would allow control and measurement of all relevant variables by ignoring human thought or cognition” (p. 376).

The history of behaviorism in educational technology can be found in a teaching machine constructed by Skinner in 1958. Skinner’s teaching machine was a rote-and-drill machine where individual instruction was presented in the form of a book; the machine housed, displayed, and presented programmed instruction. This teaching machine can be viewed as a form of early technology which can be compared to today’s basic educational software. An example of how the Teaching Machine was used is described by Skinner (1958) as follows: “In using the device the student refers to a numbered item in a multiple-choice test. He presses the button corresponding to his first choice of answer. If he is right, the device moves on to the next item; if he is wrong, the error is tallied, and he must continue to make choices until he is right” (p. 971). Though basic, it is easy to see the similarity between the teaching machine and many of today’s educational software programs. Like the teaching machine, computer software designed for students help to reinforce student behavior. Skinner’s early work and findings with the teaching machine can be applied to modern day computer programs, they are fundamentally the same. Skinner’s teaching machine provides a connection to today’s digital world which can be generalized and described as the roots of behaviorism.

Behaviorists believed that meaning exists in the world separate from personal experience. All instructional goals are framed in specific, behavioral, and observable terms. In this approach, the instructor is the focus of the presentation and interaction. Teachers work with the individual students when they need extra help. The student’s role is to absorb instructional presentations and material and use them to create performances which indicate attainment of correct mental models. Structured assignments are directly linked to the learning objectives. There is minimal or no cohort discussion in this model of direct instruction. Assessment and evaluation are based upon individual tests and performances to demonstrate mastery of entities, activities, and processes.

Many aspects of behaviorism have led to the development of important instructional technologies Sutton (2000). Examples of behaviorism in online instruction are educational software and computer-assisted instruction. Drill and practice tutorials are designed to reward students “through an encouraging comment before moving on to the next learning objective” (Shield, 2000, p. 1). Shield concluded that “the student's mastering of basic technological terms, descriptions of components, and understanding of theory behind technical processes can be achieved through structured programs delivered through software programs or similar media” (p. 1). Current behaviorists believe that students learn by memorizing chunks of information before higher-level, problem-based learning can take place (Shield, 2000). Shield (2000) believes that much of today’s curriculum focuses on these memorized bits of information and concludes behaviorist practices are still relevant in today’s digitized world.

Behaviourist CALL was applied in the 1960s and 1970s when the Audio-lingual method was mostly used and delivered students with drills and practice. This model used the technology as a tutor, presenting exercises and non-judgmental feedback.

It is grounded on the communicative approach, communicative CALL emphasizes more on using forms rather than on the forms themselves. The outspoken CALL programmes deliver skill practice in a non-drill format, through language games, reading and text reconstruction. This approach still uses the technology as a tutor, although it provides students choices, control and communication. Another CALL model used for communicative activities includes the technology as a stimulus, as in programs that inspire writing or discussions, and which may not be specifically designed for language learners. Finally, communicative CALL also uses the technology as a tool, in programs that do not offer language material but permits the learner to comprehend and use the language, such as word processors, desktop publishing, spelling and grammar check programs, as used for instance in process writing.

The current method is integrative CALL, which is grounded on multimedia computers and the Internet. These technological growths have transported text, graphics, sound, animation and video to be retrieved on a single low-cost technology. These resources are all related and called 'hypermedia', enabling learners to steer through CD-ROMS and the Internet at their pace and path, using a diversity of media. (Wesley et al., 1985, p. 12-16)

### 3.1.2 Social constructivism (development) theory

#### Lev Vygotsky and Piaget

Social constructivism theory (Social Development Theory) was developed by Lev Vygotsky (1978). His theory of learning emphasizes the role which social and cultural collaborations play in the learning method. Vygotsky positions that education is co-constructed and that individuals learn from one another. He excluded the assumption made by Piaget that it was imaginable to separate learning from its social setting. He supposed that constructivists such as Piaget had overlooked the fundamentally social nature of language and thus failed to recognize that learning is a combined process. Piaget's theory identifies that development precedes learning, whilst Vygotsky (1978) experienced social learning precedes development, asserting "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level. Now I discussed in the next few paragraph Vygotsky's Social Constructivism Theory.

Lev Vygotsky (1896-1934) was a Russian born Psychologist who gained global attention with his 1962 publication of his Social Development Theory, one of the foundations for constructivism. Constructivism has a point of view that is presently considered the more popular of the theory in "education policies, education models and education practices focus on constructivism" (Brown, 2006, p. 109). Fosnot (1996) suggested that constructivism views learning as an interpretive, recursive, and building process by which active learners interrelate with the physical and social world. Kruse (1998) supported Fosnot's views on constructivism, because he also indicated that this approach has shown to have a positive effect on students' ability to increase their knowledge.

Vygotsky's Social Development Theory (SDT) introduces two major principles:

1. Cognitive development is limited up to a certain extent or within a certain range, at any given age of the individual.
2. An individual's full cognitive development requires social interaction.

Three themes support Vygotsky's SDT principles: Social Interactions, The More Knowledgeable Other (MKO), and the Zone of Proximal Development (ZPD). Vygotsky's theory of cognitive development is primarily related with the more complex cognitive activities

of children that are governed and influenced by the principles:

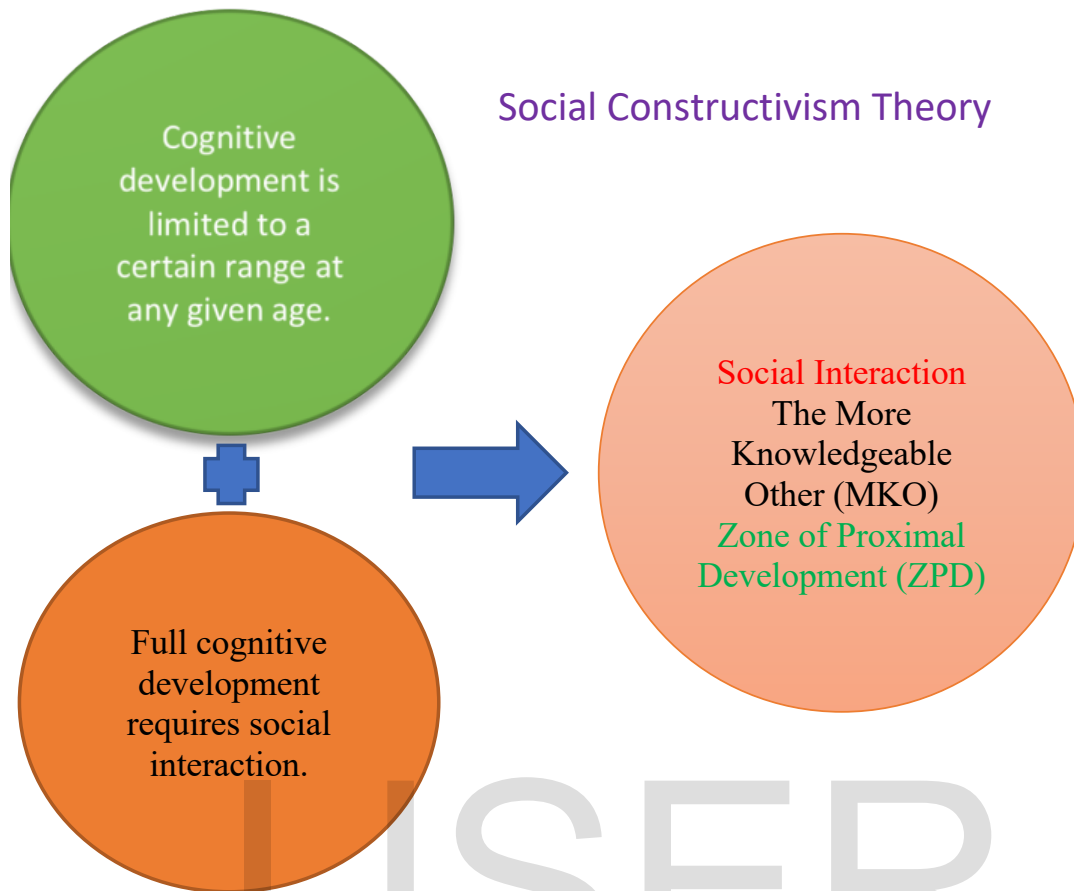


Figure 1: Social Constructivism Theory (Vygotsky, 1978).

### Social Interaction

According to Vygotsky, cognitive, conscious intellectual activity, is a result of reciprocal interaction exchanges between individuals and society. Just as society is shaping the individual, the individual is shaping society. Beginning as children we cannot learn without some interaction with things or people. Rather through exploration, communications and observations with others we gradually grow and develop. And social interactions continue to play a fundamental role in our cognitive development as we age. Vygotsky believes development is preceded by social development, stating: "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (inter-psychological) and then inside the child (intra-psychological)" (Vygotsky, 1978). To summarize, social exchange is required for learning and social interaction is necessary to function and become fully developed.



### More Knowledgeable Other (MKO)

According to Vygotsky (1978), much meaningful learning by the child occurs through social interaction with a skilful tutor. The tutor may model behaviours and deliver verbal instructions for the child. Vygotsky denotes to this as cooperative or mutual dialogue. The child obtains to understand the actions or instructions provided by the tutor then adopts the information, using this to guide or regulate their performance. This tutor is also categorized as More Knowledgeable Others (MKO). When we have something new to learn, we often seek a knowledge expert to help us gain new information and apply new skills, we are seeking a mentor or as Vygotsky would say, a More Knowledgeable Other (MKO). The MKO is any individual that has greater understanding or a higher skill level than the learner, with respect to a concepts, process or task. While the MKO can be a peer, a younger person or even technology, most often the MKO is a teacher, coach or older adult. Although, self-initiated learning and discovery can be effective, learning will become increasingly productive and contribute to cognitive development when supported by a more knowledgeable other.

### The Zone of Proximal Development

Vygotsky specified that a child respects an adult's example and steadily improves the ability to do positive tasks without help or assistance. Vygotsky's often-quoted explanation of zone of proximal development grants it as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance, or in cooperation with more capable peers." Vygotsky among other educational professionals trusts the role of education to be to provide children with experiences which are in their Zone of Proximal Development (ZPD), thereby boosting and advancing their learning. The MKO works in conjunctions with Vygotsky's Zone of Proximal Development (ZPD). The ZPD is something of a gap analysis, where the learning facilitator identifies the learner's ability to perform a task independent and at what point the learner will require MKO support and guidance to complete a task. Vygotsky claims it is the space between independence and requiring guidance, the ZPD, that learning occurs.

As a visual for the ZPD, consider an inner circle that represents what a learner already knows and the outer most circle that represents what the learner does not know. The middle circle represents what the learner can achieve or discover on their own. The inner circle, the gap, between independence and full support is where learning occurs. Within this zone, the learner

is most responsive to instruction and coaching from the MKO. The MKO should provide guidance and allow the learner to develop their own skills, by fostering independence the MKO will help the learner gain higher mental functions faster.

All these theories stay useful based on the above-mentioned Computer-Assisted Language Learning advocates, therefore, its inclusion in the research.

### 3.2 Conceptual framework

Computer Assisted Language Learning (CALL) is not an alien to the academic world. This research's conceptual framework comprises of two components which specify the critical elements in learning English as a Foreign Language. The research structure and purposes will vary significantly according to how the respective components are defined. The technological knowledge indicates what skills the foreign language learner acquires and the knowledge that underpins those skills. The expertise used in computer-assisted language learning is often recognized with proficiency in a structured understanding of the foreign language. This understanding reflects both the central role of the old teaching language design, and, possibly also the more traditional viewpoints about language learning held by many CALL designers who have approached the task from the fields of technological intelligence and Internet world. More recently computer-assisted language learning systems, particularly in the high-tech world learning environments, explicitly attempt to develop communicative competence. Moreover, there are some Language Learning Websites which will foster the students what they know and do not know about the materials used. This knowledge can involve the checking of errors made, as well as the learning goals that are adequately met. This model of what the students know serves as valuable input to the checking element of the research. The activity uses the continually upgraded materials to check language use and faults in terms of underlying structural misunderstandings of the language which they disclose in the tests or exercises. This information is used in evaluating students' progress and in determining the most effective mode of presentation and explanation. Besides, the site model can be designed to take into account other capabilities of the learner, including learning strategies and limitations due to the learner's knowledge.

First of all, Behaviorist theory has been related to the study which was coined by John B. Watson. Behaviorism is a learning theory supporting the idea that behavior can be controlled

or modified based on the preceding or following reactions to behavior. So, in the learning experience a behavior will occur if given the right environment and a behavior is only likely to reoccur based on the consequences that follow, either reward or punishment. An advantage of Behaviorism is the ability to clearly define the intended behavior and then create an environment that will measure the behavior, support the behavior and foster reoccurrence. Behaviorism is, from a scientific standpoint, looking for simple explanations of human behavior. For an example, a teacher provides a substantial list of practice problems for students to help them learn Algebra.

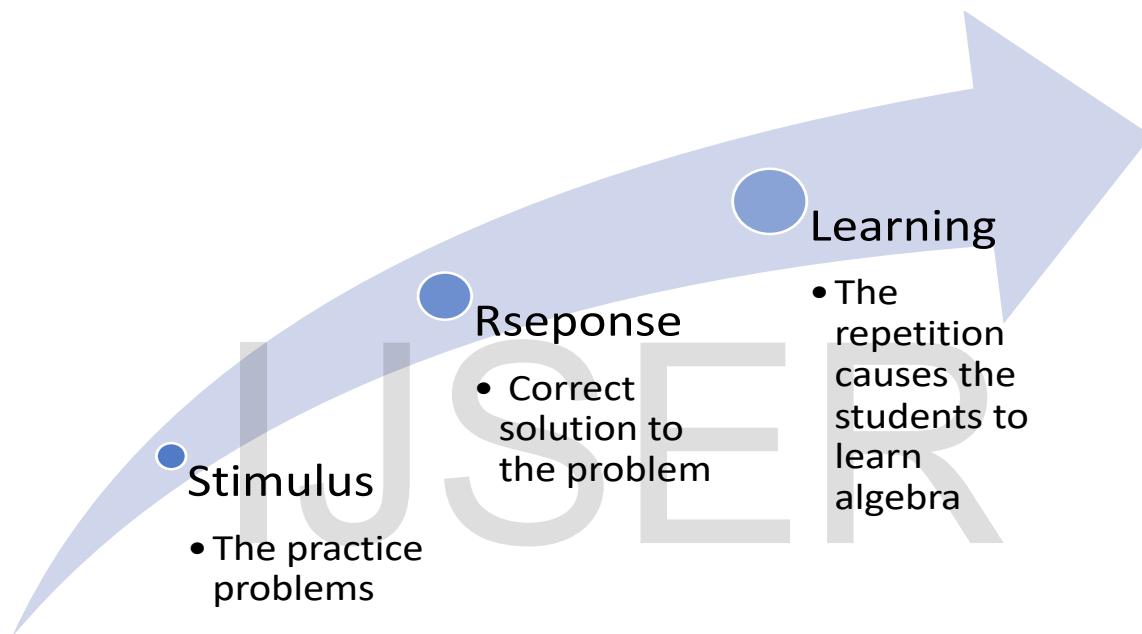


Figure 4: Behaviorist theory by Watson (1913)<sup>4</sup>

Reflect an online algebra class. First, the instructor creates a video and posts the video in the online classroom showing the learner how to solve an algebra problem, then the problem will be assigned to the student. The student is asked to create a video of the process they use to solve the problem. The student is told if they solve the problem, they will receive an immediate electronic medal. With ten electronic medals, they will receive extra credit in the course. This is a new algebra problem to the student. None of their previous learning has prepared them to complete the problem. What will they do? This depends on their previous experiences with math. The student will apply their previous math strategies to solving this equation. Suppose the student has 10 attempts, learned and unlearned responses and through this process the student solves the math problem. The time it took the student to solve the

<sup>4</sup> [http://faculty.mercer.edu/codone\\_s/tco363/2014/behaviorism.pdf](http://faculty.mercer.edu/codone_s/tco363/2014/behaviorism.pdf)

problem was 15 minutes. Once solved, the student receives an electronic medal. The next time the student is given the problem, they make fewer mistakes and solve in 5 minutes. In three trials or less the student will be able to solve the type of problem rapidly. The student's ability to complete the problem with increased speed is a function of frequency and regency (Watson, 1930, p. 204). In the language classroom, assignments should be structured such that desired student behaviors can be defined and are directly scaffolded by the assigned work. The student's developmental behavior and growth should be observable and desired student performance should be rewarded. As an example, based on the related research,

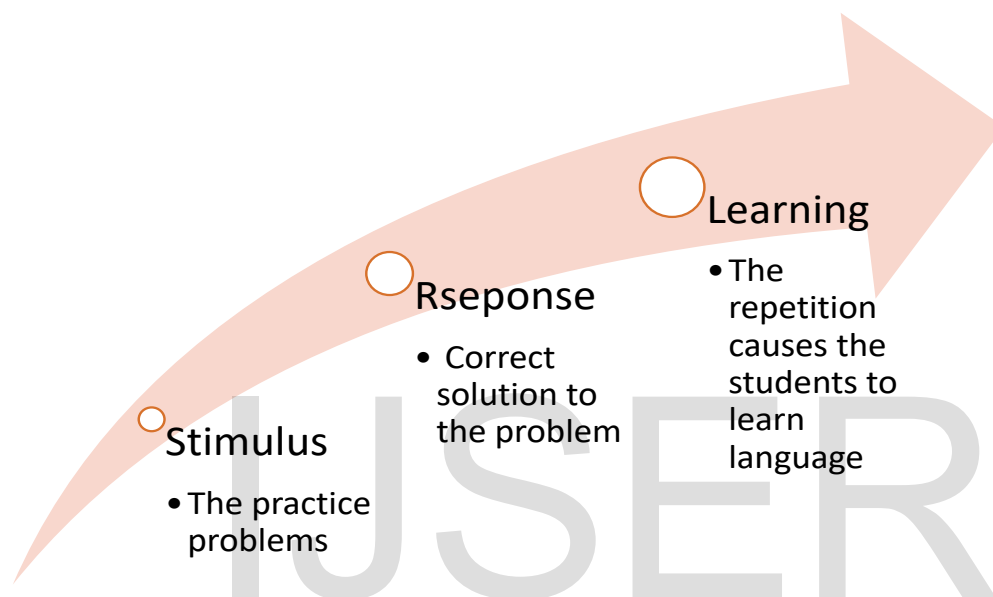


Figure 5: Behaviorist theory followed by Watson (1913)

Finally, Vygotsky's (1978) theory of social constructivism has been related to this study. Vygotsky's theory of cognitive development is primarily concerned with the more complex cognitive activities of children that are governed and influenced by several principles in the present research. MKO refers to school teachers who are more knowledgeable persons than

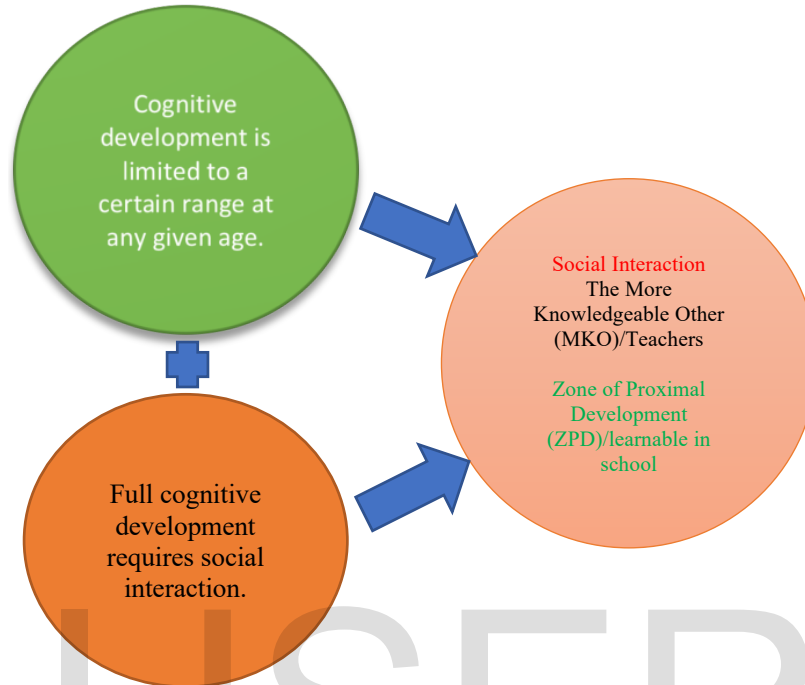


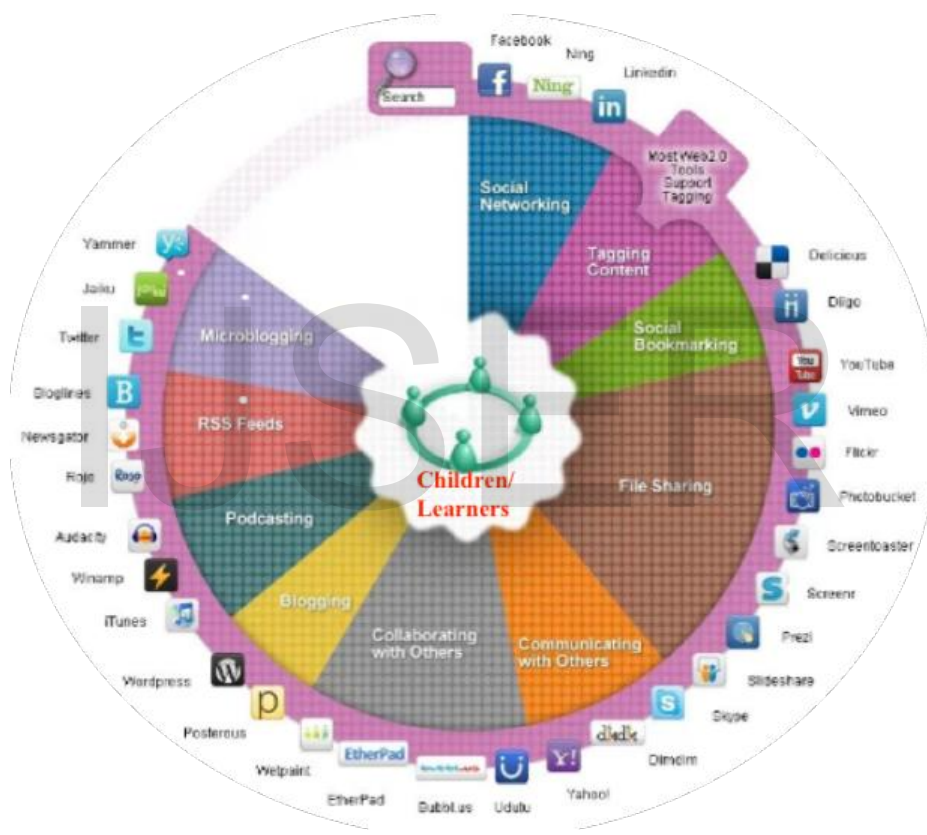
Figure 2: Social Constructivism Theory (Vygotsky, 1978).

the students and ZPD refers to the learnable matters in school with their colleagues and teachers.

Beck and Kosnik (2006, p. 8) think that social constructivism is not just an abstract idea; it can play a significant role in solving the problems and tensions teachers face in teacher education. According to Vygotsky (1978) and Beck and Kosnik (2006), all the members of a learning community has to present their ideas powerfully while remaining open to others' opinions. No concept or thought can be expressed without connecting it to the existing knowledge; new approaches must be based on the old ones since learning/teaching is a gradual process rather than a sudden initiative (Randall and Thornton, 2001). So, it is crucial to provide new knowledge based on their existing knowledge. Beck and Kosnik (2006) claim that with encouragement and support from the learning community, student-teachers begin to develop their pedagogy that fixes their needs and talent. Society or community has to play a vital role in this gradual process of learning to teach as Brophy (in Beck and Kosnik, 2006, p. 9) stated that a well-developed community could have a positive influence on teaching. Beck and Kosnik (2006) postulate that while improving working conditions and resources, high-

quality training should be provided to the teachers to enhance their experience and institutions should spend more on training than they used to pay before (p.8). The primary role of the teacher should be to motivate the children to create their own knowledge through their personal experiences (Rummel, 2008).

Vygotsky thought that cognitive development happens as the result of social interaction which is fundamental to the learning experience. This experience can either occur online (for example over widespread social media instruments like LinkedIn, Twitter, Facebook, Blog, Wiki and so on) or offline (through group discussions).



Figur 3: Social Development Theory by Vygotsky. Elements for Constructing Social Learning Environments.

This study discusses what kind of support the teachers get from their schools to develop their teaching skills, and whether the authority is cooperative enough to spend money to improve their teachers' skill in using computer and technology to teach better.

## 4. Research Methodology

### 4.1 Introduction

This chapter seeks to explain the philosophical underpinning, and methodological tools and techniques selected to understand phenomena in the field under study. The research design is considered plans and procedures to conduct research (Creswell, 2009). This will include the philosophical assumptions that underpin the process of knowledge production. These elements will together set the scene for how the research site was selected, which considerations were prioritized when sampling, and finally who the participants were. A discussion of research methods used will follow, where the focus is on interviews and observations, with an emphasis on the role of the researcher in data collection. A particular concern will be given to doing research with students, due to the necessity of acknowledging them as meaningful actors and future leaders in the society. Further on, how data was analyzed and interpreted will be explained, and finally, the ethical consideration important to acknowledge when in the field conducting research with real persons, will be discussed.

The chapter entails the research design and the nature of approach used, methods of data collection that were employed and the ethical issues that were considered during the project are also embedded in this chapter. The population and sampling technique are also found here. This chapter also entails the data collection tools. Lastly, the chapter tackles validity and reliability, ethical issues and the challenges.

### 4.2 Research design

The study employs a qualitative research strategy in which recognition of words is emphasized rather than a reliance on numbers in statistics. Qualitative method makes it possible to explore the life-views of participants, contrary to quantitative method where numbers will give generalizations about a phenomenon, but not be able to understand a phenomenon in depth. Within naturalistic and the interpretive inquiry there are diverse methodologies for interpreting meaning, each of which has its own philosophies, principles and methods of interpretation. Using the ontological and epistemological assumptions of the naturalistic and the interpretive paradigm, Glaser and Strauss developed a rigorous and a systematic methodology for collecting and analysing qualitative data. This methodology was termed Grounded Theory (Glaser and Strauss 1967). Grounded Theory methods are:

A set of flexible analytic guidelines that enable researchers to focus their data collection and to build inductive middle-range theories through successive levels of data analysis and conceptual development. ...A grounded theory approach encourages researchers to remain close to their studied worlds and to develop an integrated set of theoretical concepts from their empirical materials that not only synthesize and interpret them but also show processual relationships (Denzin and Lincoln 2008, p.204).

Unlike other naturalistic and interpretive research methodologies which aim to describe and explore phenomena being investigated, Grounded Theory explains in-depth what happens in such phenomena. The main feature of Grounded Theory is that it is an ongoing process of interaction between the researcher and the studied area. This process involves collecting and analysing data concurrently, i.e. the researchers can start analysing data as soon as the data collection commences, without having to wait until all information has been gathered (as is the case with other interpretive research methods) to start analysis. This feature helps the researcher to be very close to his/her participants (Goulding 1999; Birks and Mills, 2011). The understanding of what is acceptable knowledge, and the nature of social entities in the social world is embedded in underlying philosophical assumptions: epistemology and ontology. Different kinds of worldviews create the basis for the selection of approaches and procedures for collection of data. Hence based on philosophical assumptions, I attempt to understand the social world of the participants through an interpretivist, constructivist lens.

Breidlid (2013) states 'epistemology' as 'theory of knowledge', meaning "the nature, scope and sources of knowledge", or how "people view and make sense of the world according to what they have learned and what they believe" (p.2). Chilisa (2012) says about epistemology that it inquires into the nature of knowledge and truth. It asks, what are the sources of knowledge? How reliable are these sources? What can one know? How does one know if something is true? Kvale & Brinkmann (2009) states that epistemology is the philosophy of knowledge and seeks to find out what is regarded as acceptable knowledge within a setting. According to Breidlid (2013) Western science and knowledge have enjoyed a hegemonic global position since the period between 1400-1600 AD. Since then, there has been a perception of Europe's superiority, contributing to military, economic, political, and epistemological domination over countries in the global South (p.7).

Interpretivism provides one lens in understanding, and originate from the concept of 'Verstehen', "which means understanding and refers to the unique human capacity to make



sense of the world” (Patton, 2002, p. 52). This implies that the researcher attempts, through interaction and observations, to understand how participants perceive their social reality by being empathic and reflecting on the socio-cultural context (Patton). The intellectual tradition stemming from interpretivism is the philosophy of phenomenology, which is concerned about understanding and describing the world the way participants understand and describe it (Creswell, 2009; Kvale & Brinkmann, 2009). Within these positions, a qualitative inquiry entails thus to listen and interact with individuals in order to understand their subjective meaning of the world, and hence being able to describe their social reality the way it is experienced by them (Creswell, 2009).

Ontology is the philosophical assumption necessary to bear in mind when studying social phenomena. It involves how one understands the nature of existence (Kvale & Brinkmann, 2009). Chilisa (2012) defined that “Ontology is the body of knowledge that deals with the essential characteristics of what it means to exist” (p. 20). The understanding of what is real can be viewed, in a qualitative inquiry, from a social constructivist perspective. Social constructivism understands social phenomenon as constantly being influenced by social actors through interactions (Bryman, 2008). The idea has roots in the work of Berger and Luckmann (1991) who asserted that human beings and the society have a dialectic relationship. This implies that social interaction between human beings influences notions and understandings of phenomena. This in turn is reflected back to the individuals who adapt to the institutions or cultures that are continuously fashioned and constructed. Qualitative research with a constructionist lens hence understands the social world as constructions. This implies that there is not one definite truth, which involves that the presentation of an account is colored by the involved participants and the meaning they construct together, and in interaction with the researcher (Bryman, 2008).

Through an interpretivist, constructivist position the researcher is considered a traveler, one that encourages individuals to talk about their study (Kvale & Brinkmann, 2009). In a qualitative research the researcher is considered the main instrument in the research process (Kvale & Brinkmann). This is in accordance with the social constructionist thought, where new meanings are created through interactions. The researcher brings in her worldviews and interpretations, and thus presents one account of a reality. Thus, a value free investigation is desirable, but it can be discussed whether it is actually realizable. Consequently, the researcher has to reflect on ethical and personal issues during the process (Creswell, 2009).

In this study, I attempt to investigate how individuals experience the circumstances in which they learn and teach, and their perception on the role and outcomes their participation in the classes can have in their lives. Doing qualitative research offers an understanding of peoples lived life, their attitudes, meanings, behaviours, and gives an opinion to those who participates (Cohen, Manion, & Morrison, 2011), which is some of the core issues of the research. The inquiry in my study focused on understanding an educational experience which happened within a social world. Thus, I aimed to describe, explore and interpret the teaching methods currently used by technology in Bangladesh, as well as the factors that influence their choice of teaching methods. Consequently, I used the tools of Grounded Theory not for theory generation but because they allowed concurrent analysis and iteration. This choice was dependent on the assumption that the tools of Grounded Theory would provide me with a better understanding and interpretation of the area under investigation, since the tools of Grounded Theory permit the researcher to go beyond a simple description and exploration of a study to an interpretation of it. It has been important also from the outset of my study to make clear my ontological and epistemological position, i.e. to clarify that my position as regards the study was relativist and subjectivist in order to allow the examined issue to be understood relatively according to the outcome of interaction with the participants of the study. Moreover, whereas the traditional interpretive research methods follow a linear mechanism in conducting and analysing a study (i.e. a researcher starts collecting data then analyses it), the methodological procedure of Grounded Theory is a circular mechanism which helps a researcher to conduct and analyse data concurrently (Glaser and Strauss 1967; Denzin and Lincoln 2008; Birks and Mills 2011; Arthur et al. 2012). Thus, such a circular mechanism permitted me to be very close to my sample and investigate the research issues in-depth through collecting data from the interviews and then supplementing the interview data with data from the questionnaires. I also collected additional data if the examined issues needed more explanation by carrying out further interviews (iteration) or referring to the documentary sources and using behaviorism and social constructivism theory as theoretical framework for analysing data and discussing the findings. I also theorized the methodology of ethnographic research as ‘deep hanging out’. The phrase ‘deep hanging out’ also hints at a contrast between methodologies of cultural anthropology and political science (Gusterson, 2008, p.93). I emphasis here on methodological interests more unique to the ethnographic combat such as gaining access to the fieldwork, doing semi-structured interviews, participant observation, navigating the ethical obligations of fieldwork (Gusterson, 2008, p.94).

### 4.3 Research process

The figure below displays the overall process of the study, from the selection of site to the data analysis. In the following text I will elaborate on all choices made during the process, which have been determining factors to the knowledge production.

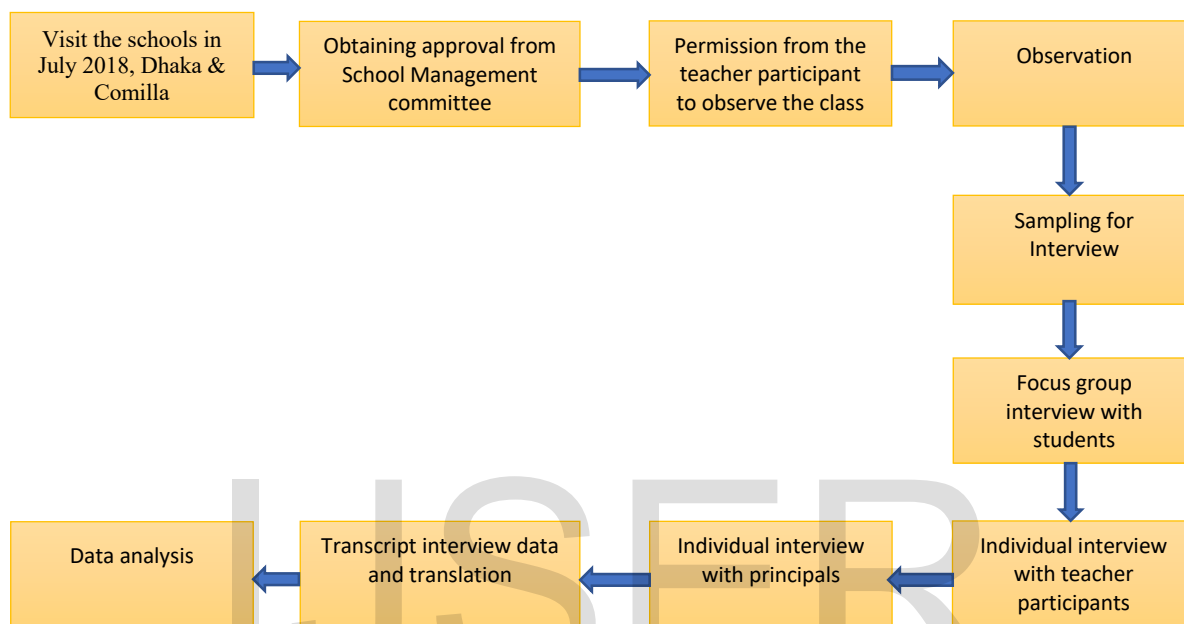


Figure 6: Research process

### 4.4 Location selection

As my research topic is computer-assisted language learning at the higher secondary School in Bangladesh, so my research sites selected in Bangladesh and I always wanted to balance the data from rural area and urban area so that I might get actual feature of my research topic. Because urban area has some more facilities than the rural area.

I left Norway for doing my fieldwork in Bangladesh and I lived in my home in Dhaka. I took preparation for fieldwork, I made interview guides and sent to my supervisor Merethe Skårås. She gave me some advice and instruction and finalized the interview guides. Then I selected two higher secondary institutions: one from Dhaka city and another one from Comilla Division’s rural area, near Dhaka district so that I can go there from my residence. Another reason to select Comilla is one of my friends works there so that I can get easy access to the school. Another school that I selected from Dhaka city where I am a director. However, I did

not work my research site, I worked in a different branch so that students did not know me, and I introduced with them as a researcher from Norway. I came here only for doing my research.

#### 4.5 Gaining access

For the research sites of Comilla, I contacted with my friend and after getting green signal, I went to my research site. I lived there with my friend and his two colleagues. They, all three, live there in an apartment, so I stayed with them. At first day, the principal was not present at the school, so I waited for the next day. Next day I met principal and submitted my papers to the principal and told him my purpose why I came here. He received my papers and told me tomorrow he will inform me. Next day he told me, yes you may go ahead. Then I started my observation in school B first. It was from July third week to fourth week. In the same way, I went to the school A in Dhaka city and submitted my papers to the principal. Then principal discussed the management committee and replied me, yes you may go ahead. I observed two classes here each day from August first week and second week. I got access to my research sites; I did not face mentionable problem.

#### 4.6 Sample selection

The study used stratified random sampling and purposive random sampling procedures, which involve that the sample was selected randomly in order to fulfil for the goals of the research (Bryman, 2008). Informants were thus chosen due to the potential of being information to the issue under study (Patton, 2002). Because a qualitative research seeks to understand a phenomenon detailed and in-depth, the sample size is small, whereas the larger sample size, selected randomly, is imperative in quantitative research (Patton). Because the sample size is small in qualitative research there is a reduced ability to generalize. However, the overall goal of qualitative research is not to be able to make generalizations about a phenomenon but rather to result in knowledge about “the particular description and themes developed in the context of a specific site” (Creswell, 2009, p. 193).

Within a stratified sampling, the study employed a combination of different strategies. This can according to Patton (2002) benefit the sample because research often serves multiple purposes. The sample selection was facilitated by criterion sampling, which involves that the participants were chosen because they fitted to predetermined criteria relevant to the research

questions (Patton). Criteria were students studying in two schools in Dhaka and Comilla and participating in those schools at the higher secondary level. The other participants were selected due to the school teachers and principals under the study. The figure below illustrates the informants and their relevance to the research.

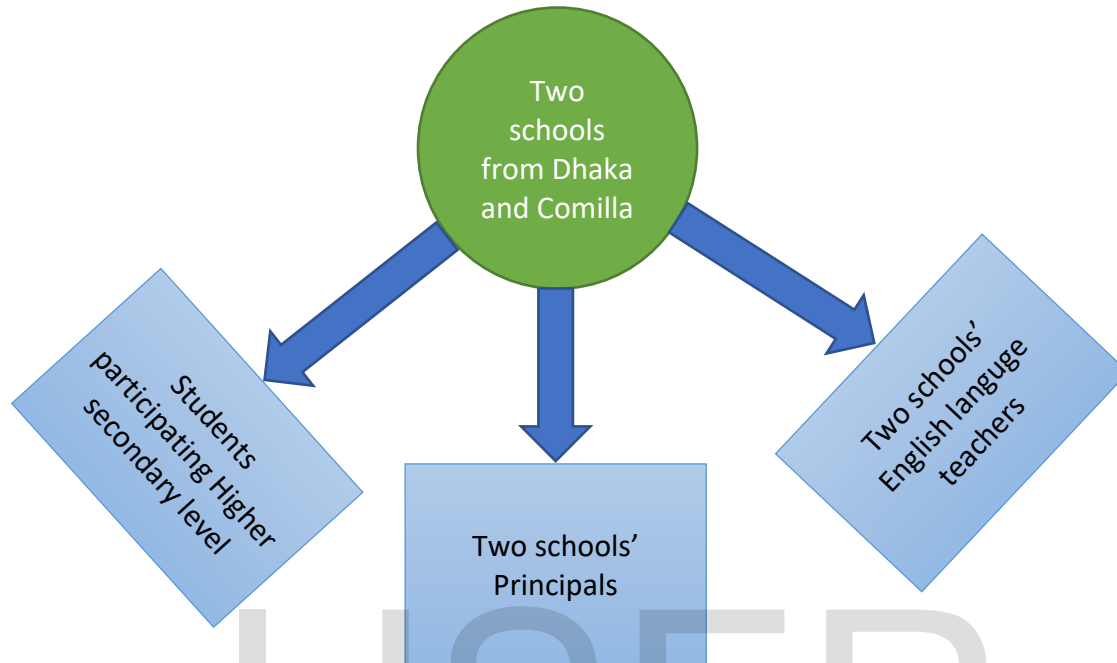


Figure 7: Participants' relevance to the research.

Criterion sampling was combined with opportunistic or emergent sampling since flexibility shaped a large part of the fieldwork, with emerging opportunities along the way- which were adjusted to and taken advantage of. The study was planned and designed in Norway, where relevant literature was read in order to be prepared for fieldwork. However, there are limitations on how much one can plan a research design before entering a site, since many elements must be changed during the process (Creswell, 2009). The researcher should hence be flexible and respond to uncertainties and changes that may occur (Scheyvens & Storey, 2003).

I mentioned earlier that I selected two schools by using area sampling, then I collected sample by stratified random sampling with proportionate for focus group interview. Conducting individual interview, there is no opportunity to make stratified sampling with proportionate. Because of limited time, I would decide on a sample size of around 24 persons as it is a qualitative study method with limited observation and interviews as the preferred method. Sample can be Principals, Language teachers, and students. The table below shows the overall sample.

Sample	Size	Female	Male	Total
Students	16	8	8	16
Language Teachers	6	0	6	6
Principals	2	0	2	2
Total				24

Table 1: The overall sample.

The interview is taken to 6 English language teachers, 2 principals, and 16 students. Nowadays there is an increasing use of focus group interviews. So, I conduct 4 focus group discussions among the student participants. It is two female students' groups and two male students' groups. So, I select four focus group discussion (16 student participants) and individual interviews (6 language teachers and 2 principals). From school A, I select humanities section higher secondary first year boys' students (second year students were not available that time) and business studies section A girls' students. After observing the class lesson, I select element by simple random selection procedure with the help of the participant TA2, select four male participants and four female participants for two focus group interview sessions. Using the same process, I selected from school B four male participants and 4 female participants with the help of teacher participant TB1 for two focus group interview sessions. Unfortunately, I do not get any female teacher or principal participants.

#### 4.6.1 Research participants

Here you will find a general description of the research participants interviewed on the two different research sites. They are organised in three tables; one for students (Focus Group Interviews, student number 1-4 group 1 and 5-8 group 2), one for English language teachers and one for the principals. In total twenty-four people were interviewed; sixteen students (four focus group interviews), six English language teachers and two heads (individual interviews). Each of the coming three tables mentions reference code for the participants which will be used in the findings chapter to specify who said what. Find as an appendix# a more specified list of code names given to each participant. An example of such code is SA1; when the code starts with S/T/H refers to student/teacher/head, A/B refers to School, and the number at the end refers to a specific student, teacher or head.

In the first table below the students are described; what gender they are and whether they are in their first or second year of the higher secondary school, gender, age and their academic qualification.

STUDENTS	School A (8 students, two focus groups: 1 & 2)	School B (8 students, two focus groups: 1 & 2)
Reference (code name) in thesis	Focus Group 1: SA1, SA2, SA3 & SA4,	Focus Group 1: SB1, SB2, SB3 & SB4,
	Focus Group 2: SA5, SA6, SA7 & SA8	Focus Group 2: SB5, SB6, SB7 & SB8
Gender	4 females and 4 males	4 females and 4 males
Age	16 to 17 years	16 to 17 years
Year in HSC	All are in year 1	All are in year 1
Academic background	Bangladeshi Public Education, it is called general education. All students already passed secondary school certificate (SSC).	Bangladeshi Public Education, it is called general education. All students already passed secondary school certificate (SSC).

Information on the six English language teachers interviewed in the two different research sites can be found in the next table. Along with information on the gender, age and their education and work experience.

TEACHERS	School A (3 teacher)	School B (3 teachers)
Reference names (code name) in thesis	TA1, TA2 & TA3	TB1, TB2 & TB3
Gender	3 males & 0 females	3 males & 0 females
Age	TA1: 40 years, TA2: 29 years & TA3: 25 years.	TB1: 28 years, TB2: 45 years & TB3: 50 years.

Academic background	Honours with masters in English Language and Literature	Honours with masters in English Language and Literature
Work experience: this job	TA1: 15 years, TA2: 3 years & TA3: 1 year.	TB1: 5 years, TB2: 20 years & TB3: 25 years.

Information on the two members of leadership I managed to interview can be found in the next table. Aside from information on gender, age and their academic background, subjects they teach or have taught.

<b>HEADS (Principals)</b>	School A (1)	School B (1)
<b>Reference names (code name) in thesis</b>	HA1	HB1
Gender	Male	Male
Age	HA1: 52 years	HB1: 49 years
Academic background	Honours with masters in Arabic Language and Islamic Studies	Honours with master's in political Science.
Other subjects taught. Roles (had) in current school.	Principal and Islamic Studies teacher.	Principal and Social science teacher.

#### 4.7 Observation

Interview can be an efficient way in the construction of knowledge, but there are limitations as to how much can be learned from what people reveal through talk. Not every aspect of a phenomenon can be captured through interviews; it is thus imperative to consider other methods for true knowledge production. “Observation is a powerful tool for gaining insight into situations. As with other data-collection techniques, observation engages issues of validity and reliability (Cohen et al., 2018, p. 562). Borrowing from Patton (2002), “To understand fully the complexities of many situations, direct participation in and observation of the phenomenon of interest may be the best research method” (p. 21). Hence, listening, watching, reflecting and engaging with students and teachers through participant observation



can provide insight in life-world (Mayall, 2008). Where interviews can give insights to subjective meanings, observations can contribute with externally observable behaviors (Patton, 2002). Interviews as a research method were therefore supplemented with observations to be able to describe the context where people live. According to Marshall and Rossman (2016), observation is more than just looking. It is looking (often systematically) and noting systematically people, events, behaviours, setting, artefacts, routines, and so on. According to Patton (2002), this kind of methodological triangulation; the use of multiple methods to investigate a phenomenon, strengthens a study. A direct observation is imperative for a holistic understanding; one does not have to rely on other sources, and has the opportunity to see elements of the context that could be taken for granted by the participants (Patton) the researcher can hence discover factors overlooked by those living in the setting. Denscombe (2014) states, it can be systematic and structured or take some less structured form such as participant observation (p. 205). Observation offers an investigator the opportunity to collect first-hand, 'live' data *in situ* from naturally occurring social situations rather than for example, reported data (Wellington, 2015). Nevertheless, although observations can give valuable contributions for the collection of data, the researcher should also, according to Patton, bear in mind that their observations are value-laden perceptions. It is necessary to acknowledge this kind of reflection.

Actively participating in the life of the observed means going where the action is, getting one's hands dirty, participating where possible in actual program activities, and getting to know program staff and participants on a personal level- in other words, getting personally engaged so as to use all of one's senses and capacities, including the capacity to experience affect no less than cognition. (Patton, 2002, p. 48)

The above quote implies that one as a researcher needs to engage fully in the realities of the participants, as was something that naturally occurred in this research process. Bryman (2008) have suggested that the inquirer will feel forced to participate in the studied activities since a lack of involvement can send signals that questions her commitment to the setting, with a consequence of losing credibility. When I started observation, I informed the participants and took permission from the teachers' participants, they provided me their class routine where mentioned class time and room number. I attended at school A, two teachers' classes and the students were first year humanities boys' section where was 20 students and business studies girls' section A where was 45 students. Likewise, I observed at school B in first year, there was 65 students in one section (language class takes place with all students' science, business

studies and humanities) and three teachers take classes. So, I informed previously all three teachers and took their class routine.

Participant observation, the essence of the deep hanging out, denotes a method of research in which researchers join in the flow of daily life while also taking notes on it (Gusterson, 2008, p. 99). My observation took place in two ways, one is taking notes and other one is audio recording; however, I did not take all 30 class-hours audio, I recorded only a few of audio in the observation time.

#### 4.8 Interview preparations

After finishing observation, took preparation for interview. I checked my mobile video recorder for capturing video record and contact with the teachers. First of all, I arranged focus group interview in school A, and it was organized at their school. Then teachers' participants and finally, principal. Similarly, I arranged in school B. students were very much eager to participate their interview.

#### 4.9 Interview guides

Before taking interview, I prepared three different interview guides for group discussions (students), individual interviews (teachers and principals) which I sent to my supervisor Merethe Skårås and she suggested me to take some necessary change. After taking some necessary editing, I took it as final interview guides.

#### 4.10 Setting

A research interview is considered as a professional form of conversation with certain power symmetry between interviewer and interviewee (Kvale & Brinkmann, 2009). It is thus not an everyday conversation between equal partners but rather a conversation facilitated with techniques for the interviewer to get insight in to the participants' meanings relevant to the issue under study (Kvale & Brinkmann). This was attempted through semi-structured interviews, which provide the interview setting with a guide that seek to cover topics of interest (Kvale & Brinkmann).

The qualitative researcher is considered a traveler who meets and interacts with people and encourages them to tell about their experiences (Kvale & Brinkmann). Data collection is

conducted in a natural setting, where the role of the researcher is to get insight into the participants life-world by talking and interacting (Creswell, 2009). Knowledge is thus constructed between the researcher and the researched, in line with the social constructionist thought. An important consideration, on the basis of the non-naturalistic setting of the interview, is that the outcome can result in artificial knowledge, where the interviewer asks questions and the interviewee politely responds (Greener, 2011). It is thus important to reflect upon elements with the interview that accomplishes or fails to enhance the reliability of interviews as a method. It is particularly urgent to emphasize how power has influenced the construction of knowledge.

Power is something innate in human conversation and relation, asserted by Kvale and Brinkmann (2009). This implies that total elimination of power from a conversation is impossible. The researcher thus has a responsibility to reflect on the power asymmetry between her and the participants. When interviewing students, it is imperative to recognize the power relations that emerge from the setting. Although I do not consider myself as an authority, I had to acknowledge that I probably was from their point of view.

In line with the phenomenological assumption, the social researcher is concerned with how individuals make sense of the world (Bryman, 2008). The researcher thus holds the responsibility of gaining access to participants felt comfortable, in a space natural to them, since the researcher should strive to make the interview setting as naturalistic as possible (Kvale & Brinkmann, 2009).

All three different interviews were arranged at school both in school A and school B. According to social bindings, it is not possible to take interview outside the schools and also not possible arrange all students outside the school. To arrange everything, teachers' participants helped me a lot. Both school A and school B, focus group interview setting was their regular classroom. After finishing their regular class, I informed them to wait for interview and it took maximum two hours in each group. I interviewed four focus group interviews (school A two groups and school B two groups). In each group there was four students (I mentioned earlier).

The teachers were interviewed in formal setting (in school) since it is difficult to contact them outside the school. So, the setting might influence their responses as they were diplomatic

while talking in the formal environment. The interview session took 15 to 20 minutes. The principals' interviews were also taken in their office. Since they were in a formal environment and surrounded by other staffs and sometimes colleagues, they were very diplomatic while talking. However, they answered all questions whatever I asked them and cooperated me a lot. They knew that I am also a teacher, so they always helped me to find out actual data.

## 4.11 Interviews

### 4.11.1 Focus Group Discussion

Focus group interview is a qualitative method for data collection. A focus group is "a group involved of individuals with certain characteristics who focus discussions on a given issue or topic" (Anderson, 1990, p. 241). Denscombe (2007, p.115) states, "focus group consists of a small group of people, usually between six and nine in number, who are brought together by a trained researcher to explore attitudes and perceptions, feelings and ideas about a topic". Rice and Ezzy (1999) claim that Bogardus<sup>5</sup> in 1926 primarily explained group interviews in social science study. Throughout World War II, Merton<sup>6</sup> also expended focus groups as the means for analyzing people's answers about war-related information and the effectiveness of the soldiers' training contents. In the 1950s, the market investigators began to use this method to gather more precise information about the consumer product likings. (Denscombe, 2007; Patton, 2002; Wisker, 2001; Anderson, 1990). After that, the use of focus group interview spread broadly to social enquiry. However, Rice and Ezzy (1999) argue that between 1950 and 1980 focus group realistically vanished from the disciplines of social research. Morgan (1997) asserts the fact that this technique was primarily ignored by the original supporters and other researchers who favoured other procedures generally. However, recently, focus groups have become popular amid qualitative investigators in social sciences. Casey and Krueger's (2000) opinion, focus group, delivers "a more natural environment than that of an individual interview because participants are influencing and influenced by others- just as they are in real life" (p.11). Focus group discussion intentions at collecting high-quality data in a social setting (Patton, 2002), which mainly help to understand a particular problem from the viewpoint of the participants of research (Khan & Manderson, 1992). The subject as to why

---

<sup>5</sup> Emory S. Bogardus (1882-1973), in full Emory Stephen Bogardus, served as President of the American Sociological Society in 1931.

<sup>6</sup> Robert K. Merton, full Robert King Merton and the original name is Meyer Robert Schkolnick (1910-2003), an American sociologist whose diverse interest included sociology of science and the professions, sociological theory, mass communication.

and when focus group discussion should be used is very significant. Firstly, focus group discussion may be a valuable study instrument when the investigator lacks substantial information about the subjects. Focus group offers "a rich and detailed set of data about perceptions, thoughts, feelings and impressions of people in their own words" (Stewart & Shamdasani, 1990, p.140). Also, focus groups are primarily beneficial when a researcher aims to find out the people's understanding and experiences about the subject and causes behind their particular pattern of thinking. (Kitzinger, 1995).

As focus group interviews are "naturalistic rather than natural events and should not be left to chance and circumstance" (Bloor et al., 2001, p. 57). Researcher shows a critical role in arranging, conducting and governing the focus group process. The experienced and skilled moderator verifies the quality of data generated through focus group discussion. Several ideas need to be considered at the planning stage.

First of all, I studied about the objectives of the focus group. I contacted participants beforehand and made aware of the goal of the action. It is vital to select a suitable class of the persons for the focus group. It is essential to decide who can provide the preferred information. Occasionally one single group of individuals can deliver the required data. However, it should not be limited to one target people when some may be related to the problem (Anderson, 1990). The time and location of the discussion should be decided to keep in view the suitability of the participants. It is also to confirm that the place is obstruction free. Deciding what and how many inquiries are to be asked is essential for each interview. The enquiries may have both content and process functions. Concerning content, five or six interview questions are comprised in many focus group interviews, but a lot of conversation can take place because of group process and I asked more than that of with consulting my supervisor. Anderson (1990) gives some strategies for composing the questions for focus groups: focus group questions are always open-ended, interview guides must be "qualitative" and quantifiers, avoid questions that have a likely 'yes' or 'no' answers, use of directive method is avoided to know the motives behind a particular standpoint or reaction of the participant, consequently 'why' question is not usually asked, a large number of queries may be outlined through brainstorming, and then may be reduced to problems as required and the item should be arranged in a natural flow.

As regards the characteristics of the participants, it usually is believed that participants may allocate some common attributes so that communication may happen to an optimum level, and situations may be avoided where persons dwarf or withdraw. However, there is disagreement of view among the experts on whether homogeneous or heterogeneous group best serves the purpose of focus group discussion. Several authors (Dawson et al., 1993; Morgan, 1997) claim that if the subjects belong to the same communal and cultural setting, e.g., age, sex, religion, socio-economic background, occupation, educational background, ethnicity etc., it will confirm the free-flowing, open and sincere discussion among the contributors. Instead, some writers (Anderson, 1990; Khan et al., 1991) believe that heterogeneous group arrangement of the focus group works pleasantly. Moreover, the investigator is needed to inquire him as to what nature of the group— homogeneous or heterogeneous may best realize the objectives of his study. So, I arranged a homogeneous group with the same sex, age, occupation, educational background group for better data. With slight differences, many authors (Anderson, 1990; Denscombe, 2007; Morgan, 1997; Patton, 2002; Ritchie & Lewis, 2003; Stewart & Shamdasani, 1990) advise that the size of the focus group should range from six (6) to twelve (12) participants. It is claimed that if the number is less than six, it is challenging to deliver the synergy needed. The data gained may not be rich and abundant, and one or two persons may try to control the discussion. Conversely, a group with more than twelve participants is intrinsically difficult to manage. The group may breakdown into factions and participants may not find adequate opportunities to talk in a big group. However, small focus groups can be used when the topic needs to be explored in greater strength and where participants have long and substantial pieces of knowledge to be shared with the group (Anderson, 1990). Previously I mentioned in this research, four participants took part in each group.

Like other qualitative methods, the members of the focus group are not selected randomly. Preferably a purposive sampling method is usually used (Dawson et al., 1993; Morgan, 1997; Patton; 2002). The investigator selects the participants who suit the topic/ problem under study. It is believed that the purposive sampling assistances the researcher find the information-rich cases which may best crop the essential data. The question as to how many focus group interviews are desired to confirm the proper coverage of the topic is fundamental. In most of the situations, the saturation system is applied. It means that researchers usually gather data until they get essential new information. Anderson (1990) witnesses that the first

two groups mainly give significant further details and discussion has mostly been tired when researcher gets into the third or fourth session.

Starting the session with several transitional periods is highly desirable. At this stage, participants can be positioned at ease by serving them refreshment and engaging them in small talk. However, talking about the critical issue of the focus group interview should be avoided. The researcher started the formal group session by thanking the participants for coming and stating the purpose of the group concisely. They may also be informed earlier about why they were nominated for the discussion. The researcher emphasized the rules of secrecy and invited them to ask queries if they want any.

As the process develops, the moderator presents the questions one by one. To facilitate the interaction between the group participants, the researcher continually delivers probes and pauses and involves participants in discussion without expressing any value on the answers received (Anderson, 1990). Rice and Ezzy (1999) advise that a focus group may be held in the mother tongue of the subjects. If the researcher and participants' languages are diverse, bilingual moderator or translator may be used. The researcher researched his home country, so he did not need any translator or bilingual moderator. As a general regulation, the average duration of a focus group is two hours (Rice & Ezzy, 1999). With exceptions, the focus group discussions are mostly directed during one and half hour. In the end, the members should be thanked by the researcher for their valuable contributions to the study. Anderson's (1990) point of view, providing a summary of the conversation to the members is undesirable because the achieving consensus is not the aim of a focus group but exploring maximally the various perspectives held by participants.

For analysis of the data, it is essential to record the discussion with truthfulness. The participants' answers may be recorded generally in two ways: It is taking notes and tape recording. Notes-taking is required for an interview. A moderator or assistant moderator may record the conversations in written letters. The recorder must not give indications to the group members about the value of their responses and must not note only the best answers (Anderson,1990). As taking notes, it is beneficial to write time references in the margin and to highlight or underline the specific significant points. So, the researcher uses mobile audio and taking notes, audio recorder activated beforehand and then start the session and taking notes.

In the case of notes taking, there is an opportunity that notes taker may not be capable of recording everything discussed within the group. Recording discussion by tape recorder is vital and mostly advised for all the focus groups (Rice & Ezzy, 1999). It is recommended that an inconspicuous recording device should be used so that the group atmosphere may not be troubled. The use of tape recording gives the benefit of accessing a full record of perhaps a rich source of data. On the limitation side, it is always laborious to listen to the tape. Taking written notes is similarly useful even when a tape recorder records the discussion.

The method of data analysis must begin immediately after the group sessions end. Anderson (1990) has given some useful advice for data analysis. He is in sympathy of looking at first for major principles and making a list of them, considering words and contextual background of their use, trying to scrutinize the strength of the reactions/ feelings, and striking stability between detail and conciseness.

Anderson (1990) detects that there are two critical types of reporting focus group data: First, conducting analysis and reporting summary of the principal thoughts; second, giving the subject's words verbatim. Which method is to be used depends on the researcher's purpose and projected readers. Anderson prefers combining narrative synopses with actual quotes that explain the participant's views in his or her own words. The focus groups are generally useful when they are consistent with the objectives of the research. However, Merton et al. (1990) recognize the four criteria for judging the quality of the focus group, which comprise a range, specificity, depth, and personal context. Consistent with Krueger (1998), factors that regulate the effectiveness of focus group interviews are clarity of objective, appropriate setting, adequate resources, enough subjects, skilled moderator, tough questions, and honouring the participants. Gorman and Clayton (2005) classify some strengths of the focus group interviews. Rich qualitative data can be gathered with reasonable speed since focus group sessions require an only adequate time commitment from both participants and mediator. Depending on the number of interview guides and the difficulty of the issues, between one to two hours are sufficient for most interviews. Focus group members can see at a glance what is being done, and almost invariably accept that the process is appropriate. Members are encouraged to converse with each other and not merely respond to the mediator. In this way, the range and complication of attitudes and viewpoints can emerge. Focus groups deal with an opportunity for instant feedback or clarification on one's perspective, with the contributions of other group participants. They enable a researcher to take into account not only what is said



but also gestures, facial expressions and other forms of non-verbal interaction. Focus group interviews can allow a researcher to explore the unimagined aspects of the problem under study.

There are several boundaries associated with the focus group interview (Gorman & Clayton, 2005). It is significantly challenging to get the people together on time for the group session (Gibbs, 1997). A few vocal participants may control other participants in the course of a group interview. Due to the nature of group conversation, some members may conform to the responses of other participants, even if they may not agree. Sometimes it is very problematic for the researcher to find out the group with the required features. The success of a focus group is disturbed if the moderator is not skilled in handling group interaction.

Focus group interviews entered academic social research in the 1980s and the aim of my focus group is not to reach consensus about, or solutions to, the issues discussed, but to bring forward different viewpoints on the issue (Kvale & Brinkmann, 2009) computer-assisted language learning. Focus group interviews are the lively collective interaction and it may bring ahead more cognitive interviews.

#### 4.11.2 Teachers and principals' interview

In this section I discussed teachers' and principals' interviews. In subsection 3.11.1, I discussed teachers' interview and subsection 3.11.2 principal's interviews.

#### 4.11.3 Teachers interview

Semi-structured interview is the second method for this research and with this form of method I developed interview guides thematically and enthusiastically. After observing 15 class hours, I interviewed the six English language teachers from two higher secondary institutions. I tried to interview three female teachers and three male teachers, however, there was no female teachers at all. Teachers interview held on the school office in the teachers' common room after leaving all other teachers both in school A and school B.

#### 4.11.4 Principals interview

Moreover, principals' interview held on after finishing teachers interview at the principal's own offices. I captured all teachers and principals interview video with my mobile phone and

kept it in my laptop. Previously, I took permission that I captured video the whole interview sessions.

#### 4.12 Data analysis

There is no substitute for intimate engagement with data. Researchers should think of data as something to cuddle with, embrace and get to know better. Reading, rereading and reading once more force the researcher to become intimate with the material. People, events, and quotations sift constantly through the researcher’s mind. (Marshall & Rossman, 2011, p. 210)

As the above quote suggest the process of analyzing data is an intimate affair, which demand an iterative process of reading and reflecting. With the multi-method approach, employed in the study, including field notes, reflective notes, thoughts and insights, altogether provided a large sum of material for analysis. Knowing where to start and what to look after was challenging, due to the few analytic measures existing in qualitative inquiries (Bryman, 2008). Codification materials is not fixed, as with quantitative research, but there are some broad guidelines to follow. The below figure shows the process of analysis that guided my research method.

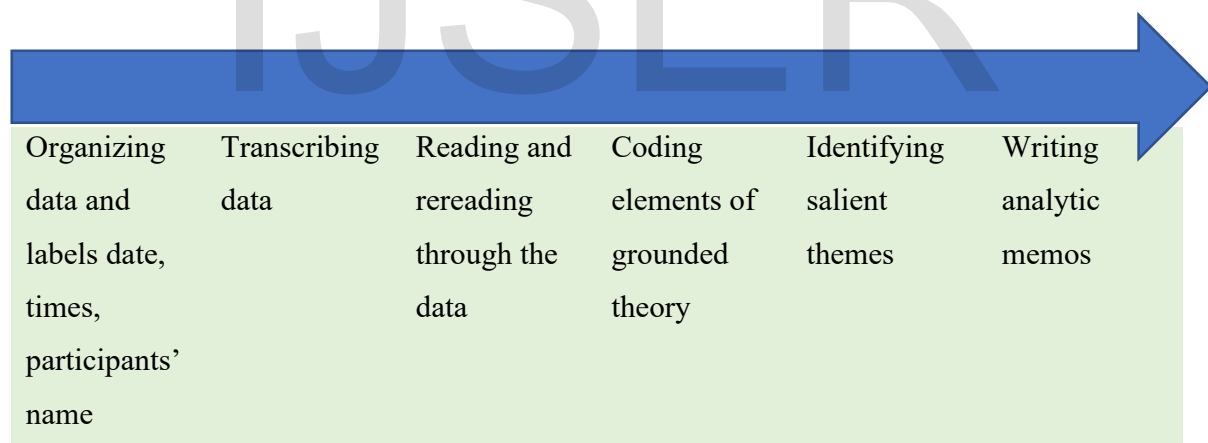


Figure 8: The process of analysis.

With the overwhelming amount of material obtained from a qualitative research inquiry it was imperative to keep record of the interviews and notes taken along the process (Marshall & Rossman, 2011). Thus, all documents were labeled with date, time and participants’ name involved. This eased the iterative process and enabled an organized analysis course. To be able to reduce material into relevant themes I used elements of grounded theory when coding. The working definition of grounded theory is “theory that was derived from data, systematically gathered and analyzed through the research process” (Bryman, 2008, p. 541).

This implies that the selection of abovementioned elements will as a result of the analysis and coding process merge into the development of a new theory. Charmaz (2006) distinguishes between two forms of coding: initial and focused coding. From the coding process I was able to find salient themes that were repeated by the informants, which revealed their importance in participants' life world. Along the process of reducing the richness of the material into codes. I wrote analytic memos as a means to describe how the data were coming together. Writing is a large part of the qualitative research process, in helping to reflect and analyze thoughtfully, as the researcher needs to be fully immersed into the process at all times (Marshall & Rossman, 2011). Based on the themes it became possible to merge the data of students, teachers and the principals together, and making connections from their experiences to the theory.

Grounded theory is the method of theory origination used in the data analysis. Grounded theory is, according to Cohen et al. (2011, p. 599), premeditated to "build and generate theory rather than to test and existing theory". Grounded theory method therefore obtains to develop theory from the scientifically collected and examined data. Nonetheless, existing theories and literature has been enhanced to understand and describe the findings presented in chapter 5. Throughout the analysis process I have used a bricolage technique, i.e. a mix of different analytical tools (Brinkmann & Kvale, 2015) in order to produce meaning from my data. Kvale and Brinkmann (2015) argued, "the outcome of this form of meaning generation can be in words, in numbers, in figures or a combination of those" (p. 268). Therefore, my analysis comprised of reading throughout the material, remarking specific passages of interest, open coding (Cohen et al., 2011), considering and highlighting statements based on themes as well as employing statements and the frequency of these each participant in a table. This latter method was done in order to find commonalities, patterns, similarities and differences among the three institutions which conforms to Cohen et al.'s (2011) understanding of qualitative data analysis. The key purpose of the table was therefore not to form statistics, but to see the usual denominators of themes among the girls and boys. Even though, the use of numbers in qualitative research is controversial, Maxwell (2010) still contends for mathematical data to be useful in order to construct claims such as 'many', 'most', 'often' and 'some' more precise. What he here appeals 'quasi-statistics' turned out to be the periphery for studying the challenges and resources in this research, as well as producing a more detailed analysis.

Now having described the considerations that have shaped the research process, I will give attention to the final and probably most important considerations in this research; the considerations ensuring the wellbeing, protection and interest of the research participants, along with ensuring quality of the study.

#### 4.13 Ethical concerns

Hammersley and Atkinson (2007) tilts five key ethical issues that characteristically concerns for ethnographic studies; privacy of the participant; to do no harm; getting informed consent; exploitation of those studied; and possible consequences for future research. I will not go into detail on all five, but they are all worth mentioning as they are imperative to reflect when preparation and conducting fieldwork in the Global South. To the best of my capability I have tried to carry out my research according to all five ethical issues. However, there are some features of doing research in the Global South I cannot deny having adverse effect. The power relations between me as a researcher and those being ‘researched’ is a compulsory matter when doing research. This unequal power relation might never be as observable and undisputable. During history, research has gotten, in many areas of the Global South, a negative nuance and reputation (Smith, 2012).

With research comes issues of colonialization, globalization, exploitation, westernization and inequality, among other negative impacts. My presence in both the urban areas, and rural areas, called for deep reflections over my position in the society of which I am studying, my role as a researcher and the power that comes with it. During my fieldwork, I have strived to follow the principle of “do no harm”. Scheyvens, Nowak, and Scheyvens (2003) explore that to “do no harm” is not enough, that research should have the opportunity to do good and that the research should include empowerment of the informants. Hugman, Pittaway, and Bartolomei (2011) advises participatory action research to ensure inclusion and empowerment of informants. With participatory action research, the method is only participatory when it is collaborative and the power between researcher and researched are equalized (Cohen et al., 2011). Full impartiality between me and my informants were difficult to obtain, and I can therefore not claim to have conducted participatory action research. Time and resources were also a factor that limits this probability. The power disparity between researcher and researched is divided in two levels; real difference, and perceived difference (Scheyvens, Nowak, et al., 2003). The real difference is what was most evident throughout my fieldwork

as education and clearly illustrated the difference in what they strive for, and what I might take for granted. The perceived difference is present in the minds of both the informants and the researcher in the sense that one might feel inferior, and the other superior (Scheyvens, Nowak, et al., 2003). Research should then not strengthen suppressive emotions or give the informants the feeling of powerlessness. Emphasized by Scheyvens, Murray, et al. (2003) is the significance of examining my own motivation for the fieldwork, being aware of my biases, examine my position as a researcher in the given society and reflect upon the power disparity. However, my research topic is not too sensitive so that I could not face too much power imbalance. In the next subsection 4.13.1, I discussed about informed consent which explained the participants privacy.

#### 4.13.1 Informed consent

Before going to the field, I wrote a detailed letter of consent aimed for my different aged participants, containing information about the research and the rights they have as informers. All research participants are above the age of 16 and entitled to participate without the consent of parents and have, therefore made their choice on their behalf. For my research to be ethical, all informers must consent to participate at the basis of fully understanding both risks and benefits from the contribution. As Hugman et al. (2011) states, desperate for assistance and seem to agree to contribute in the hope of benefitting in some way or another, it was urgent to explain with simple words and to confirm with the participants whether they fully comprehended or not. It was significant that all the participants were aware of the relationship between them and me and my role as an investigator in this context, which clearly explained their potentials towards the situation and even the different unequal power relation. Underlying in all effort done during my fieldwork is the principle of "do no harm" (Hugman et al., 2011; Wood, 2006). Wood explores that informed consent aids to confirm that I was an investigator "do no harm". Hugman et al. however, in their investigation claims that the principle of "do no harm" is insufficient without assimilating respect, beneficence and justice. What Hugman et al. propose is that the study goes beyond gathering consent, to including the participants in the research. While time and resources were limited and participatory research was hard to carry out, I attempted to make other aspects of my exploration as comprehensive as possible, particularly the process of giving data and gathering informed consent.

During the first period in higher secondary school A I understood that my consent paper was too advanced and severe to understand for student participants. After presenting the informed consent to four students, I comprehended that I had to both give information about the research, and gather their consent verbally, which turned out more effective and inclusive for the participants, since they then became a part of the conversation on how, where and why. I had to shorten my language throughout the procedure and ensure that they understood the gist to avoid misunderstandings and vagueness. Confidentiality and the integrity of the participants were provided throughout the fieldwork, as well as their secrecy. The identity of all my participants are kept anonymous in recordings and inquiry, and they have all code names in this research project.

I tried to maintain confidentiality for the participants replies, which I will preserve at all times. I maintained the informed consent of participants to interview by first fully explaining the intentions behind the study and the process of the research, so they were not cheated. As I did my research in my home country, I transcribed myself and gave to the participants and they signed so that the transcription of interviews became authentic. I also informed the participants of their right to withdraw at any time. Finally, I will give my findings to those participants, and schools which participated in this study.

#### 4.14 Trustworthiness in the study

In this research project, the concepts of 'trustworthiness' are used to assess the research findings. As an umbrella phrase for validity and reliability (Kvale & Brinkmann, 2015), trustworthiness will be used to label these aspects of my study, hence the actual value of my findings. Integrity and relevance are substitutes to validity and reliability to calculate qualitative research. I contend that validity and reliability are notions that fit best to evaluate qualitative study like this research project owing to the emphasis in validity and reliability to practice the same methods and indicators in numerous research projects. Assessing validity and reliability can be observed as concepts closer to the pragmatist worldview where reality is viewed as 'hard', single, and available for investigators to understand, making the ideas more appropriate in qualitative research. The operationalized meanings used in this study project will not straightforwardly be transferred to other research projects because the investigator, people contributing, the lived experience and knowledge the informants and the researcher had at the time the research was carried out, and setting will be different. When using semi-

structured interview guides, several of the questions asked during the individual interviews vary from one conversation to another depending on the responses and assertions from the interviewees. Even if another researcher should make use of the interview guide, they would most likely not find the same follow up questions relevant, because the answers get might be different. The new researcher would also most likely interpret things differently than what I did. If an investigator should decide to interview the same people interviewed in this study, their answers would most likely be somewhat different in the next interview, because they might have established new understandings during and after the discussions done in this research (Brinkmann & Kvale, 2015, p.3 & 15; Bryman 2016, p.33 & 374-375, 384; Cohen et al. 2018, p.6). Trustworthiness (in this research), which focuses on the life experiences and the lived world of the informers, lies in my ability to represent their subjective reality (Cohen et al., 2011). However, as there always are validity threats that may question the trustworthiness of my study, I will here adopt some aspects that might guarantee validity. Because of the limited time with the participants during my fieldwork, this might impact the answers of the participants, and I would possibly have gotten personal, and thorough explanations had I conducted a long-term ethnographic study (Maxwell, 2013). At the same time, the concept of 'thick descriptions' (Brinkmann & Kvale, 2015; Cohen et al., 2011) or 'rich data' (Maxwell, 2013) where I, as an investigator was provided with sufficient context to be able to make meaning of behaviours, lived experiences of the participants and their presence in the settlement, might increase the validity of the research. Triangulation lies in the mixture of methods, namely my observations and interviews as well as my diverse sets of data (Cohen et al., 2011), hence the number of interviews and discussions, and the variety of age and educational institutions of the participants which gave rich and in-depth data about their lived experiences. Using numbers, or 'quasi-statistics' also makes the amount of information and my claims of phenomena in my findings more precise and explicit (Maxwell, 2013).

However, there is still a risk of validity threats such as researcher bias (Cohen et al., 2011; Maxwell, 2013). To eradicate threats to the trustworthiness of my research I have recorded and transcribed all interviews and checked for errors by re-listening to the recording (Kvale & Brinkmann, 2015) as I did not get to confirm member check. The process of re-listening and ensure the quality of the transcription and translation, generated rich data and reduced some bias as I let the pragmatic data lead the way towards a grounded theory. The interview guides I asked during the interviews and group discussions and its wording (ref. appendix #), may

also influence the trustworthiness of my research (Kvale & Brinkmann, 2015). At the same time, I will say for my interview guides to research what I intended to study, namely the participants' perception of their own lived world.

In this study, the criteria of credibility, transferability, confirmability, dependability, and authenticity are essential channels. How these aspects have pertained in the study will be explored in the next few subsections.

#### 4.14.1. Transferability

There is responsibility on the shoulders of the researcher to give the correct presentations of the information given from the individuals. This can be achieved through writing convincing narratives that captures many perspectives of a theme which will help to describe the setting realistically, which ensures the transferability of the study (Kvale & Brinkmann, 2009). The concept of transferability is similar to external validity; how research findings can be transferred to other contexts (Bryman 2016, p.384). I have described the research context, theoretical perspectives, and research methods in a way that give the reader a possibility to assess whether or not the research findings can be transferred to other contexts. When viewing reality as multiple and socially constructed, I have done my best to ensure that the research has been carried out in line with best practices of research. I have done my best to transfer the knowledge acquired during the course on research methodology in the master's degree into the whole research process.

To better ensure that the research findings are transferrable to other contexts the research has included twenty-four respondents than what would be common in ethnographic research, I have focused on two schools. I have also shared the research purposes with my interviewees, and with contacts I have within the schools, and with researchers I know (Bryman 2016, p.384). This process started with the research proposal, where the proposal was shared with relevant contacts and possible research participants. I got relevant and useful feedback and advice for the further process from my supervisor and my colleagues. To give readers a possibility to assess if I have been able to carry out the research in line with best practices of research, I have also carefully described the methods used here in this chapter, and how these are in line with literature on research methods. However, it is also important to acknowledge that when doing research about technology assisted language learning and teaching, transferability of conclusions arrived at can be challenging. As this thesis has shown, people with students are



extremely homogenous, however, there is no universal understanding of what computer-assisted language teaching and learning.

#### 4.14.2. Credibility

Credibility narrates to whether the findings are believable. To establish the credibility of the findings I have tried my level best to ensure that the research is carried out in line with best practices. It has also been important to share the findings with the informants, and other interested people from the research sites where the research was carried out. In this way I could get confirmation that what I have understood and emphasized in the findings is in line with how members of the researched community understand their own situation. This form of member validation, or respondent validation, has given me an opportunity to share the whole research and the findings (Bryman, 2016, p.384). At the end of the research findings, I went back to my research sites and I showed their data and discussed with the participants in February 2019. In this way the participants have had an opportunity to their data and to confirm or disconfirm the data and provide new perspectives to the research process. In their feedback, almost all interviewees confirmed that they felt that the research reflected their opinions and presented the situation as it is on the ground in the two schools.

#### 4.14.3. Conformability

To ensure confirmability of the research, I have critically assessed if my own values and theoretical perspectives have influenced the research process and the conclusions arrived at to an extent that can make the research findings less trustworthy. This is reflected throughout this thesis. To give readers an opportunity to critically assess if my theoretical perspectives, presuppositions and values have influenced the research to an extent that makes the findings less trustworthy, I have included a section where I have described my position as a researcher. It is also important to recognize that no researcher can be completely objective (Bryman 2016, p.384).

#### 4.14.4. Dependability

Dependability of conclusions arrived at can be viewed as a parallel to reliability in qualitative research. To ensure dependability I have carefully written a comprehensive research log which documents and describes in detail the whole process of the research project. An anonymized version of the research log, and all transcribed interviews will be made available for those who are interested to assess if my theoretical approaches are justifiable, and if the methods that are

used are relevant and carried out according to best practices of research. This enables a sort of ‘audit’ of the research process and the conclusions arrived at which are more comprehensive than the criteria for evaluating reliability (Bryman 2016, p.385-386).

#### 4.14.5. Authenticity

To ensure authenticity of the research, I have throughout the research process, and especially when synthesizing the findings, and during the analysis critically assessed to what extent different opinions and perspectives presented to me by the interviewees are captured and understood. I have also assessed if the research has a potential to help the research participants to value different perspectives and to better understand their own context. This was done in discussions in the dissemination workshop, and in one of the questions the participants were asked to give anonymous responses to (Bryman 2016, p.386; Kvale & Brinkmann, 2015, p.279).

It has been more challenging to assess if the research has served to sensitize and empower participants to act to change their situation, because the research process has been time limited, and it may only be visible if the participants act after the research has been disseminated, and the final thesis is submitted to the university. However, in once, one participant commented that some of the concepts described were advanced and difficult to understand, and the participant asked if an easy-to-read version of the thesis will be published. I have promised to write and share an easy-to-read version of the thesis and share this with all interviewees in addition to sharing this thesis. By doing this, it might be more likely that some people will have access to information that can inspire them to act (Bryman 2016, p.386).

#### 4.15 Limitations

This research will not rely only random sampling methods and will therefore not be representative of the total population of language teachers, principals and students in Bangladesh. I will be able to attest to the reliability or validity of the secondary data. Thus, both the secondary data and the interview data will be generalizable to the entire population of Bangladesh. This study will emphasize the use of qualitative criteria which parallel concerns about validity and reliability, as outlined credibility, transferability, dependability, and confirmability. The proposed research will be useful for EFL teachers to know about the practical ways of using technology in classrooms, the government agency will be able to

understand the actual situation about classroom teaching by using technology and the possibilities and challenges of Computer-Assisted Language Learning (CALL) in Bangladesh.

Research has consistently shown the value of computer-assisted language teaching and learning in every stage of education, especially when applied appropriately incorporating in the areas of comfort, enjoyment, and increased confidence in using a computer. However, unless tasks were explicitly tied to learning objectives, students did not recognize their instructional value and perceived CALL activities as doing more harm than good. Studies should focus on studying the effects of particular CALL tasks. Research studies should look at tasks designed to develop one of the four specific skill areas, culture, motivation, or test preparation. These tasks need to be clearly defined, and instructors and tutors need to be trained to implement them effectively.

IJSER

## 5. Findings

This chapter presents the empirical data from my fieldwork. I represent here findings from focus group discussion for students (sixteen higher secondary students divided into four groups), and eight individual interviews (six language teachers and two principals). The data organized in five main categories: the purpose of technology use, technology for language teaching and learning, teacher's role in using technology, language websites for learning language, and suggestions and future possibilities, based on the interview guides. I represent data chronologically such as students, teachers and principals. My research sites were two different schools: one in an urban area and the other one was a rural area.

The first section (5.1) describes why people use technology, especially higher secondary students, based on their (students) experiences, teachers experiences and how often they use technology. The second section (5.2) points out how much students and teachers use technology for learning and for teaching English as a foreign language. The third section (5.3) describes how are the teachers' role in influencing using technology, data from focus group discussions. The fourth section (5.4) narrates what is the purpose of websites to learn a foreign language. Final and the fifth section (5.5) describes how to improve the computer-assisted language learning situation in Bangladesh and how will be the future computer-assisted language learning setting in Bangladesh.

### 5.1 Purpose of using technology

Collected data from the focus group interviewees are discussed in subsection 5.1.1, individual interviewees data from the teachers are discussed in paragraph 5.1.2. Data from the individual interviewees, the principals, is not related to section 5.1.

#### 5.1.1 Students perspective of using technology

One of the focus group participants (SA1) described her purpose of technology use, "I can use computer and smartphone at school and using these devices, I can learn a language, use Facebook, podcast, play games and so on." Another participant (SB2) also describes her feeling about the use of technology,

I use a computer and smartphone to enjoy different facilities to cope with modern techniques to get positive feedback (something good for the students). New age depends on technologies, and without technology, it is not possible to fulfil our dream.

And of course, modern technologies play an essential role to learn a foreign language. (SB2)

Another focus group participant (SA6) describes the purpose of technology use,

Technologies have done our life comfortable and facilitative; these devices have done our daily work easy and risk-free. I use these devices for communication, entertainment and so on. I also use these devices for finding information, research, acquiring knowledge, scientific matter, distance communication, information exchange and language learning. (SA6)

SB8 does not use a computer, but he uses a smartphone. He said, "I do not use a computer, but I use a smartphone. I use it to communicate and as a language learning tool. I also use it for entertainment." SA2 also says like SB8, however, they were in a different group. She does not use IT for language learning. She said, "I communicate with our friends and family within a moment. By using these devices, I can do our social works and browse the internet for Facebook, Twitter and so on. By doing these, I learn a new language."

#### 5.1.2 Teachers perspective of using technology

"Many schools in Bangladesh arranged multimedia class so that they can take their class with technology" (TB3). One individual interviewee TA2 describes the purpose of technology use, "At present, these types of the technology-based class is possible in our college as it is arranged for the students and the teachers" (TA2). "We use Communicative language teaching (CLT method) to teach English, so we try to focus their language skills first. And for developing listening skill, we are obliged to use a multimedia class" (TA3). One individual participant TA1 says, "In our classrooms in a country like Bangladesh such kinds of using of technology is not so much, however, nowadays it is being increased". TB1 describes his experiences for technology use. He said, this is a technological period,

There is a different kind of technology of our country such as a computer, mobile phones. I use a mobile phone. I have downloaded different types of dictionaries, similar words, and various topics which are most beneficial for my students and me. I apply these things in the classrooms for the benefits of students (TB1).

TB3 describes, "Depending on the classroom situation sometimes I use smartphones and multimedia devices." TB2 said on the purpose of technology use with disheartened,

We use various types of technologies according to the classroom situation, as a rural area most of the students are not able to understand what technology is. I try to motivate them to draw attention. I use some pictures, audio, video by using smartphones. These

are difficult because they don't have available devices. As a result, they fail to practice language learning (TB2).

## 5.2 Technology for language teaching and learning

I organized data in subsection 5.2.1 for the students' interviewees and 5.2.2 for the teachers' interviewees. Principals are not entitled to discuss the technology for language teaching and learning, so they have not participated here.

### 5.2.1 Students' perspectives

One focus group participants SA1 describes technology for language learning,

English is an international language. Everyone uses this language all over the world. So, it is the essential and primary thing to learn this language now. The influence of the English language is seen on technologies everywhere on the world. So, it can be a great source of learning the English language by using technology. (SA1)

Another focus group participant SA2 says, "We use the internet for study in college such as making an assignment, developing listening skill and so on" (SA2). SA3 also said, "We can learn English by using TV, smartphone, computer and so on." She further said, "We can make a friend from other countries via the internet and speak with them to develop language skill." Other focus group participant SB6 said, "Now the world is called a global village for the sake of technology. We can learn language by using technology via the internet" (SB6).

SA6 said about this,

The English language is difficult for us because of our mother tongue (different structure, so we face difficulties to learn the English language). Pronunciation is essential to learn, and it is not such an easy task to learn pronunciation. By using technology, it is easy to learn pronunciation, meaning and so on. Technology plays a vital role in our life. (SA6)

One of the focus group interviewees said,

Using technology is very important to learn a language. We come to know various kinds of linguistic devices. If we make a mistake, we can solve it by using technology and sometimes it is corrected automatically. We learn our mother tongue from our childhood, but English is not our mother tongue. So, it is different for us to learn. We use technology to know the word meaning, synonym and so on" (SA7).

One of the focus group participants SA8 said, "To learn the English language, I can use technology. I can surf the internet by which I will get a solution from all problems. For example, we can learn language by using Google, YouTube, Listserv, weblog, Facebook and

so on” (SA8). SB4 said, "Technology can help us to learn a language in many ways such as we can watch YouTube video for pronunciation or learning grammatical rules. We can also find synonym or antonym and learn from the web how to write a paragraph, letter, application and so on."

### 5.2.2 Teachers' perspectives

Teacher participant TB1 said about technology for language teaching, "For language teaching, I use multimedia classrooms and projectors which can help the students to improve their learning capability" (TB1). One of the teachers' participants TB2 describes, "We can use a laptop and use multimedia classroom. One room is allotted for the students and decorated with technology. We can gather all the students in that room, and we take language classes there."



Photo 1: Only one room for taking a multimedia class which one of the teachers' participant mentions in school B (Photo credit Abul Kalam Azad).

### 5.2.3 Homework

There was one interview guide about technology-based homework for the teacher participants, and I got some data from them which I described below.

SB2 said about the technology-based homework, "We can give them (students) homework like a paragraph, composition not only that we can give assignment which is related to technology" (SB2). Another participant TB1 said,

I always try my level best to give students homework and tell them to use technology. I keep them consistently busy, and I give them some similar words, vocabularies, if the students do not develop their capability in English, they cannot get acceptable results or cannot get standard jobs in our country or for a competitive world. So, I keep them giving the effective words for the students such as listening, reading, writing and speaking so that they can use technology. (TB1)

SA3 presents his opinion, "It's an age of globalization, so most of the students have their Android mobile phones or laptops, I inspire them to practice English through the internet like pronunciations, listening skill and speaking also. They are very much smart, so I think they can use it without any hesitation. Because they are upper-level students, I mean age level 16 to 18 years" (SA3).

### 5.2.4 Internet and social network

There was an interview guide to discuss internet and social network in the focus group discussion and students' participants represent their opinions. I discussed below:

SA1 said about internet and social network, "The wellbeing of technology spreads on our everyday life. Internet is one of them which is part of our everyday life. I always try to use the internet positively, and I get a great benefit from it." SA2 described that it is important to learn language by using social media like Facebook, Twitter, Blog, Podcast, WhatsApp etc. There are lots of social media on the web, and there is some free online course on social media. We can use these sites for learning a foreign language (SA2). SA3 describes the importance of social media in her point of view,

Social media is essential to learn a language or English language. Facebook, Twitter, Instagram, linked in, and different kinds of Blog are called social media. These websites inspire us to learn the language. We can make a group to learn language by using social media. We can also make foreign friends to learn English. (SA3)



### 5.3 Teachers role in using technology

There was one discussion about how much teachers influence you to use technology, and they answer differently. I discussed the data below:

SA1's views about teachers' role to influence students using technology for learning a foreign language, "Our teachers sometimes influence us to learn language by using technology. They always help us how to take help from technology for learning a foreign language." SA2 also described her opinion, "Our teachers influence to learn language by using technology and solve different types of difficulties. Teachers can solve a grammatical problem like vocabulary, synonym and including antonym. Besides, we can find our solution by using technology" (SA2). SA7 also gives his opinion, "Language teachers inspire me to use technology in many ways. They teach us how to use technology, how to search language websites and the importance of learning a language." However, SA6 gave his opinion negatively and said, "Teachers do not influence me to learn language by using technology at all and some teachers are not so much skilled about technology-based teaching."

#### 5.3.1 Problems in using technology

There was one interview guide for teacher participants, what kind of problems are you facing to take a multimedia class or implement computer-assisted language teaching. I got available answers from the teacher participants, and principal participants. I discussed the data below: TA2 expressed his experiences and said, "We have the limitation of using a computer and don't have a good arrangement to give training for teachers, we have no available spaces. And furthermore, we have a little scope or don't have enough time to think about using computer, and we have so much load to take the class (TA2). TA3 also said like this,

I think it's a widespread problem in Bangladesh because we haven't enough instruments like computer, projectors, so we face a lot of problems. Not only village students but also city's students cannot always use multimedia in their classroom, so in English language learning, they cannot get a right way or right lesson in their class for the lack of instruments (TA3).

TB1 describes, "Ours is a developing country, not developed. There are lots of problems in our country, and the electricity problem is one of the most common problems. When we use computers, we feel some shortage of electricity" (TB1). Another participant also mentions lack of electricity, "Sometimes we face lack of electricity and other logistic problem" (TB3). Two heads say almost the same about problems in using technology. HA1 said that

multimedia projector and other devices are not available in our country and sometimes electricity cut off. We cannot buy generator because of monetary problem. As a result, without electricity, teachers cannot teach students with technology. I hope in future government take initiative to make electricity available. HB1 says, “Our institution is located in a rural area, for this reason we cannot continue our multimedia class in well because of load shedding. Sometimes we cannot get internet connection properly.”

### 5.3.2 Mobile technology for language learning

Bdnews24.com published a report by referencing Bangladesh Telecommunication Regulatory Commission (BTRC)<sup>7</sup> about mobile phone users and says, more than 140 million people<sup>8</sup> use mobile phone, out of Bangladesh's population of 160 million. So, it is an important tool for learning a language as well as a communication device. Almost 75 per cent of participants responded to the mobile phone. Student participant SA1 says, "Mobile data brings everything in our hand. We can learn a foreign language by using mobile internet and mobile applications. These mobile applications and websites can help us to learn the English language easily" (SA1). Another focus group participants SA2 said her point of view, "Mobile internet brings everything in our hand. We can learn a foreign language by using mobile internet and mobile applications. These mobile applications and websites can help us to learn the English language well and easily" (SA2). Other student participant SA3 said that mobile internet is beneficial to learn English whereas I watch TV programme to learn English. From class VIII, I watch a TV programme and learn English. I can pronounce English words by using a mobile phone. I can speak English fluently now (SA3). My all respondents emphasize on the mobile phone as a learning tool. So, I do not mention their all comments here.

### 5.4 Language website for learning a language

There are some language websites, and I have an interview guide about the language website, and they spoke out about the language sites. For the facilities of learning English, there are a lot of websites to train up teachers and students. These websites discuss how to learn English language and some practical exercises. For the benefit of students, there is a lot of practical

---

<sup>7</sup> <http://www.btrc.gov.bd/content/mobile-phone-subscribers-bangladesh-march-2019>

<sup>8</sup> <https://bdnews24.com/technology/2018/09/20/internet-users-in-bangladesh-top-90-million-most-on-mobile-device>

classes, audio and videos (SA1). "We can get a total solution to learn language by using language websites," said SA2. SA6 states, "English language learning websites are Google speak. Bangla to English dictionary, English to Bangla dictionary, Google translation and so on. I use these apps to learn a language." Other focus group participant SB1 said, "Using technology, I can browse language learning websites and can gather knowledge about learning a language. And I can communicate world famous language teachers" (SB1). On the other hand, SA3 answered negatively, "Actually, I did not use the language learning websites. But in future, I will use it. I know if I use learning website, I will be an expert of the English language and learn correct English." SA4 says, "I do not use any language website to learn the English language" (SA4). SA5 also said, "I do not use language websites, but I watch English news on TV, Talk-show and I read English newspaper."

#### 5.4.1 Distraction from a particular website

I discussed with focus group participants about distraction or diverted from a specific site to another site. They participated in it and gave data from their experience. I explained here that data.

SA2 told me from her experience like this, "When I search learning websites to learn language or others, some unexpected webpages come to me, and sometimes I become curious about those websites. As a result, I browse these websites instead of my expected web sites." However, SA3 affirms it, "When I search English language learning website, sometimes I go to other websites which are also learnable. It is not good actually, but it happens." Another focus group participant SA6 says, "When I search for language learning website sometimes, I get different film websites like porn or something like that, and sometimes I watch it." One of the participants SB4 states about distraction, "When I search language learning program, I see some attractive and beautiful website which attract me very much, and I browse these pages sometimes."

#### 5.4.2 Comparison of web materials (E-learning or soft materials) and physical materials (printed book)

There was a comparison interview guide between web material and physical materials of language learning for focus group participants, and they discussed that willingly. I placed here that data. SA1 says,

Internet materials are easier and more realistic than physical materials. It is beneficial for us, and I surf the internet to search for different websites to learn a foreign language. Internet materials are more useful and easiest than using physical books. To buy physical books takes too much money (SA1).

SA3 said in her point of view, "Internet-based materials are more authentic than printed books because it changes time to time. So, I think internet-based materials are more effective than that of the hard copies" (SA3). SA5 says it differently, "Internet-based study is easier than that of physical books. A teacher can teach easily by using a projector, and he/she sends us teaching materials, and we can learn from it. Absent students can also get class materials via the internet." SA6 mentions his thought, "Internet-based educational materials are more useful than that of printed books. Students can learn quickly and remember many days the educational matter which determines by using the internet or technology, where we can see video and picture" (SA6).

Almost all participants give their opinion internet-based teaching materials are more comfortable and practical than the physical books. So, I do not write more quote from them.

## 5.5 suggestions and future possibilities

At the end of the interview, there were two questions about how to improve computer-assisted language learning and what and how will be the future language learning settings. Almost all participants give suggestions on how to enhance computer-assisted language learning, and they tell about future possibilities for computer-assisted language learning in Bangladesh. In subsection 5.5.1, I discussed implications and 5.5.2 future opportunities for CALL in Bangladesh. In the two paragraphs, I organized data chronologically from focus group interview, teachers' interview and principals interview data.

### 5.5.1 Suggestions

Here I provided data from focus group interviewees, and it is very hopeful that all participants give tips to improve technology-based language learning. However, I discussed a few of them. One of the focus group participants SB4 says, "If we want to improve computer-assisted language teaching in Bangladesh, we have to learn how to operate technology-based language learning applications and have to be conscious about the necessity of technology, and how to use technology correctly and correct program" (SB4). SB3 says her point of view,

"Improving computer-assisted language teaching and learning, and we have to be aware of technology operating, usage of technology, to be attentive in learning a language and to identify the misuse of technology" (SB4). SA6 describes,

To spread technology-based teaching and learning environment, we have to be aware of people and related persons so that they can use technology. Technology and technology related equipment will be available and cheaper. Also, the internet and internet-devices will be available, more reasonable and good speed. (SA6)

SA2 says that if a country improves its technological knowledge and provide available facilities for students, teachers and general people, language learning system using technology will also automatically be enhanced. Our country is lag behind in using technology comparatively than developed countries. The government can take the initiative to build ICT and can arrange training and workshop so that students can get more facilities to learn a language (SA2). SA3 states her suggestion,

To increase technology-based education, we have to give more emphasis on technology so that every student can get facilities to use technology. We have to enrich social media with different kinds of learning tools. Schools, and educational institutions can serve more technical support to the students, to learn a language. And they can train up students on how to use a computer and other tools. (SA3)

I collected data from teachers' interviewees and discussed some data from teachers' interviews. TB3 says, "We can take help from the computer in the teaching-learning process, and we can implement a new method to teach speaking and listening skills, and we can make lesson plan by using technology." TB1 describes his suggestion, "This is a competitive world, and this is a technological period. If anyone wants to utilize computer-assisted language teaching and learning, he must know at first computer and other technological programs how to use it" (TB1). TA1 describes,

We cannot use modern tools and devices like computer technologies just now for Bangladesh is developing or developing the country, but it is very hopeful that and optimistic that Bangladesh is advancing and developing day by day. A day will come when we will be able to do that, and everything will be taught with the help of technologies, modern technologies like a computer; then we will be able to do that what our students expect from our nation or us expect from us. (TA1)

TA3 suggests that every school should have a self-access centre or language club and should manage a debating club in English. They should provide proper information or materials for students. After appointing a teacher, management should give their training five or seven days. So, they can develop their technological skills. TA2 said that human being as always love to learn spontaneously and necessarily if we use a computer in our daily work, then in spite of not having intense you to use equipment or technology for the compelled being

compelled one day they will learn. Day by day they will progress, and the country will get a benefit.

#### 5.5.2 The possibilities for future language learning

In this subsection, I discussed the opportunities for future language learning data from the respondents. Most of the participants give their opinion for a next language learning environment, and I presented some selected data chronologically from the focus group, teacher respondents and then principals. Focus group participant SA2's dreams for future language learning:

Developed ICT so that all people can get the facilities for IT. A new and developed education system so that all students can get technological facilities. Here I want to mention that if we can develop our technology, our education system will be expanded automatically. All education will be entirely free so that all pupils can get education facilities. (SA2)

SB2 describes her future language learning environment, "Language learning in future will not be the same as present time, it will be changed. So, we have to be kept fit for a future challenge. Language learning is fundamental to face the future competitive environment" (SB2).

Now I discussed here collected data from the teacher participants. One of the individual interviewees TA2 says that today's children are the future of the nation, what I am it does not matter, we should think about students. Total generation depends on students if we can make them available technology, they will grow up with good education (TA2).

TA1 says that it is very hopeful and optimistic that Bangladesh is advancing and developing day by day. A day will come when we will be able to do that, and everything will be taught with the help of technologies, modern technologies like a computer.

TB1 describes,

Bangladesh is a developing country, not developed. There are lots of problems in our country. At first, teachers are not well trained; that's why we cannot develop in language teaching and learning situations. These are the deplorable situation in our country. If we can train our students as well as teachers, we can expect good language teaching and learning situation in Bangladesh. (TB1)

TB2 said that I think English language learning will be improved in Bangladesh. Students are very much interested to learn English because they use mobile, laptop, computer and so on. If they want to operate these technologies, they have to learn English. So, in future, most of the students will get an excellent environment to learn English.

I interviewed two head of institutions, and they are very much interested in implementing the CALL program. Their opinions are almost similar. They have some limitations, although they always try to manage everything for computer-assisted language teaching, and they are hopeful of improving their language teaching classes. One of the institution head HA1 says, English is a foreign language; as a foreign language, there is no way to present students straightforwardly. Computer-assisted language teaching has many forms such as multimedia projector, mobile, laptop, smartphone. If we teach the students with these devices, students will enjoy the class, and they learn quickly.

They suggest improving computer-assisted language teaching and learning program in Bangladesh. HB1 says his view,

All teachers have to be skilled in teaching with computer and multimedia. If there is any lack, they have to be trained up. We have some infrastructural deficiency, so we have to overcome these limitations. Suppose we have 15 to 16 hundred students; however, we have only one multimedia classroom. If we overcome these limitations, we will teach students in well. (HB1)

HA1 says, "Now is the digital age what we called computer age, there is no alternative option without a computer. Our teachers need suitable training so that they can compete with the competitive world."

## 6. Discussion

### 6.1 Overview

In this chapter I discussed and analyzed the results accumulating from the data and findings presented in chapter five of this research. This discussion and analysis of the results basically depend on my interpretation and description of the learning process which is based on my experiences, observation and reflection upon the situation as it unfolded in the process of research and also on the perceptions and views from the participants of this research. In this discussion I also incorporate related views, theories and concepts from various scholars where it is deemed necessary to back up my analysis of the results.

### 6.2 Discussion based on research questions

The research attempted to find the answers of three central research questions. The first question was formed to explore how and to what extent teachers and students use technology in language teaching and learning process. The findings showed that both schools provided computer and multimedia facilities in the classrooms. However, they have no ability to provide computer and multimedia facilities in all classrooms and teachers have no sufficient ICT skill so that they can guide the students to learn foreign language with technology. School A provided multimedia and computer facilities only five classrooms for language teaching and learning out of 51 classrooms. On the other hand, school B made these facilities only in one classroom out of 60 classrooms. So, teachers and students do not always use technology in language teaching and learning process, they use it occasionally. Four teachers gave students homework which needs technological support; however, they did not give it always. Most of the teachers used computer and multimedia in their language classrooms. However, the teachers who used computer and other technology also did not use it to the same extent. Some teachers used it very frequently while others used it sometimes. Some teachers used it to show videos and for listening and speaking classes. Outside the classroom, the teachers depended on internet to collect lessons and other teaching materials, but they did not follow any specific website. They searched in Google to find a suitable website. Some teachers use smartphone for students listening and speaking classes because all classes have no computer or multimedia system. They also faced problems in downloading materials from internet, finding appropriate website, dealing with virus, handling devices like printer, scanner, projector and many other problems. Most of the teachers were not aware of different e-tools for language teaching as the findings showed that very few teachers knew about



podcasts though they never used it in their classroom. Facebook and blog were quite popular among the teachers, but they never imagined or encouraged to use them for teaching because they are informal, non-academic, and distracting element for learning. Some teachers agreed that Facebook and blog could be used for teaching and only one teacher had used Facebook for teaching purpose. So, it is apparent from the findings that teachers were not very much aware of the modern amenities of technology that could make their language classes more interactive and enjoyable. Their IT skill was not emphasized or evaluated when they were recruited. It was revealed from the interviews with the heads that none of schools considered teachers' knowledge in computer before recruiting them. HB1 said that the prospective candidates had to give a multimedia presentation where their IT skill was evaluated. From the overall responses, it can be said that the language teachers were not very up to date with computer and other technologies. Some teachers suggested that before training the authority had to understand the necessity of IT and the infrastructure of the schools also needed to be improved. The heads were also very interested while talking about training. They agreed to arrange training if their teachers needed it and they personally felt that training would be necessary or helpful. So, it might be possible for them to arrange training on CALL for their teachers and the heads are hopeful to improve their language classes with technology and internet. However, they mentioned their shortcomings that they have no ability to enrich their all classrooms with technologies.

On the perspective of the students, most of them use computer or smartphones, however, they do not use these devices always for language learning. They use technologies sometimes to communicate with others and for using Facebook, Twitter, Linked in and so on.

Comparatively, they use technology more than that of teachers, however, many students do not know how to use these devices for language learning. Almost all students want to use technology for language learning purposes, if their teachers can motivate them in proper way for example, the teachers become trained and technology oriented, students will be able to use these devices for language learning.

The second research question dealt with the challenges of using technology in language teaching and learning. One teacher said that they have too much class load so that they cannot make their lesson effective with technological devices. Another one teacher said that lack of instrument is a big problem to implement technology-based class. Two teachers mentioned about electricity problem. They have no available opportunity to take multimedia class,

whereas when they arrange in one multimedia classroom for taking language class, sometimes electricity cut off and they have no generator or IPS facilities. The heads also said that load shedding is one of major problems to teach with technology. One head said that internet speed is also another big problem. To make the teachers comfortable with using computer and technology, there is no alternative to training. In this regard, all teachers believed that training is necessary for them to develop their ICT skill. Training can help them to understand the advantages of CALL and to know the use of different CALL software and e-tools. All teachers preferred collaborative training or workshop program where the IT experts or CALL experts would be involved. They thought that this type of training session would be more practical. It can be one day to one month longer. One teacher added that ELT, TEFL & TESOL training can be more operative for language teaching class. On the social or religious restriction to use internet and other devices, teachers of school A said that they did not face any problem or any kinds of bindings. On the other hand, teachers of school B said that they faced this kind of problem and they tried to remove it with consulting female students' parents, male students have no restriction at all. So, it is assumed that rural area has some religious or social restrictions to use technology for female students. All the six teachers thought that self-access center or language lab is very essential for language learning. Unfortunately, none of the schools have self-access center or language lab.

The third research question discussed with the prospects of using technology in future language teaching and learning. Almost all focus group participants believed that all language lesson will be used multimedia, teachers will be ICT skilled and all classrooms will be technology-equipped. One focus group participant said that Google will be more effective than present situation to learn language. All teacher participants said that technology will be available in schools and learning and teaching environment will be technology-based, and web based. One teacher participant said that everything (language teaching related matter) will be taught with the help of technologies, modern technologies like computer, smartphone and so on. The heads were investigated about the existing facilities of the schools and their future plan in improving their facilities. They tried to increase more for computer-assisted language learning, but they have no available fund to increase these facilities. The heads expressed their eagerness to listen to their teachers' and students' needs in future.

### 6.3 Discussion based on theoretical framework

In this section, I discussed the related theory which I mentioned on the theoretical framework. I related the section with the findings and theory.

The findings of the central research questions suggest that since students are eager to use technology and teachers need training so that teachers can teach their students in proper way and students can use technology for language learning.

Epistemology is an area of philosophy that examines questions about how we know what we know. As philosophers attempted to answer questions, they developed answers that are clustered in different schools of thought. “These schools of philosophical thought are somewhat contrived; they are merely labels developed in an attempt to show the similarities and differences among the many answers philosophers develop” (Johnson, Musial, Hall, Gollnick, & Dupuis, 2008, p. 102). Four well known philosophical schools of thought are idealism, realism, pragmatism, and existentialism. Each of the aforementioned philosophies has implications for education. The idealist believes that the teacher is central to learning. Therefore, the idealist tends to emphasize lecture, discussion, and imitation. The realist sees the role of the teacher as a person who presents content in a systematic and organized way. Contemporary realists are behind standardized tests, serialized textbooks, and specialized curriculum for each discipline. The pragmatist stresses applying knowledge—using ideas for problem solving. Realists and idealists are most closely associated with the behaviorist’s theory of learning, because they believe in a standardized curriculum centered on academic disciplines. Pragmatists prefer a curriculum that is interdisciplinary, and they are, therefore, most closely associated with the constructivists’ beliefs about how students learn best (Johnson et al., 2008). The beginning of the 20th century ushered in the new school of behaviorism. Behavioral psychologists believed that “only observable, measurable, outward behavior is worthy of scientific inquiry” (Bush, 2006, p. 15). Because there appeared to be a link between the effects of reinforcement on learning, scientists were considered to be connectionists reflecting the connection between stimulus and response and conditioning. In other words, scientists believed all students can learn the same information given appropriate environment. The most recognized behaviorist of the time was B. F. Skinner who believed that all learning was measurable through observing changed behavior. As scientific studies in psychology “continued to test the connection between stimulus and response (and classical

and operant conditioning), limitations on the explanations of changed behavior developed a rift within behaviorism” (Bush, 2006, p. 16).

According to Morrison, Ross, and Kemp (2004), the behaviorist learning theory placed an emphasis on the effects of external conditions such as rewards and punishments in determining future behaviors of students. The behaviorist learning theory focused mainly on objectively observable behaviors and, consequently, discounts mental activities. This approach emphasized the “acquisition of new behavior” (Bednar, Cunningham, Duffy, & Perry, 1992). Behaviorists believed that all behavior is the result of an individual’s responses to external stimuli (operant conditioning). In other words, behaviorists believed that the external environment contributed to the shaping of an individual’s behavior. Behaviorists also believed that the environment triggered a particular behavior, and whether the behavior occurs against is dependent upon how an individual is affected by the behavior.

In a school setting, teachers use positive and negative reinforcements to either reward or punish a student’s behavior. The behaviorist learning theory relies on extrinsic motivators such as grades, prizes, and privileges, as well as recognitions and praises, as a means to ensure the replication of the learned activity or behavior. Teachers who followed the behaviorist learning theory would present lesson objectives in a linear fashion. In so doing, the teacher would provide hints or cues to guide students to a desired behavior, and then use consequences to reinforce the desired behavior. Behaviorists begin by introducing lower-level cognitive skills. This is followed by the building of higher-level cognitive skills. The problem with this type of instruction is that lessons are focused on learning skills in isolation (Gonzalez, n.d.). Those who disagree with the behaviorist theory believed that this theory failed to take into consideration the influence the mind has over behavior. Therefore, instead of involving students in solving problems, behaviorists use methods of direct instruction (i.e., lecturing and teaching skills in isolation) and assess their learning based on their responses to questions on oral or written tests.

“After being the dominant paradigm in American psychology for some decades, behaviorism was overtaken by a variety of research results that yielded anomalies revealing its limitations as an overall account of psychological functioning” (Wakefield, 2007, p. 170). As the field of psychology continued to evolve, researchers began to reject behaviorism and seek ways to identify cognitive processes in learned behaviors (Fisher, 2008). This led to the development

of the field of cognitive science, which “includes the study of thinking, perception, emotion, creativity, language, consciousness and learning” (Harman, 2008, p. 76).

The theory of social constructivism also emphasizes on the role of teachers and heads as it asserts that every member of a learning community can influence the teaching and learning process (Beck and Kosnik, 2006; Geijsel et al., 2009; Pritchard and Wollard, 2010). When we have something new to learn, we often seek a knowledge expert to help us gain new information and apply new skills, we are seeking a mentor or as Vygotsky would say, a More Knowledgeable Other (MKO) (Yarbrough, 2019). Students need guidance, the ZPD is something of a gap analysis, where the learning facilitator identifies the learner’s ability to perform a task independent and at what point the learner will require MKO support and guidance to complete a task (Yarbrough, 2019). Vygotsky (1978) argues that it is the space between independence and requiring guidance, the ZPD, that learning occurs.

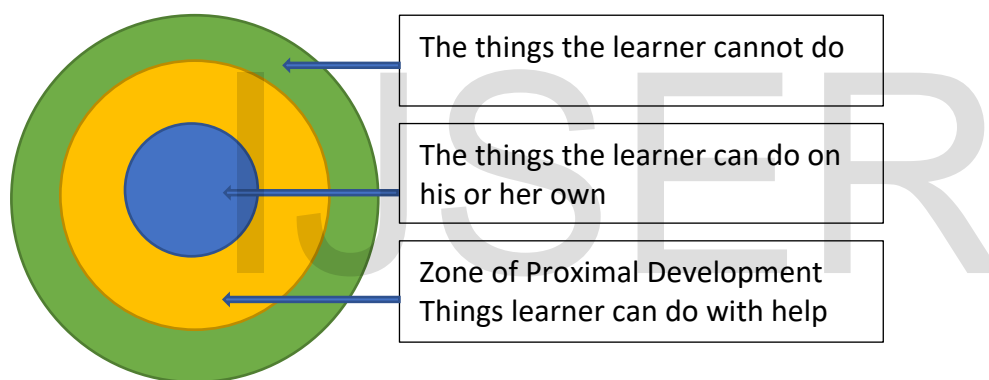


Figure 9: Zone of Proximal Development by Vygotsky (1978).

The teachers of Bangladesh are not aware of technology. They only use technology for minimal purpose and teachers do not use computer properly for various reasons like lack of facilities, knowledge and training. This finding conforms to Andersson’s (2008) research that in developing countries like Bangladesh and Sri Lanka, dearth of trained teachers is one of the obstacles in implementing computer assisted language learning. Kessler (2006) also says that teacher preparation programs forget to prepare their students with the necessary knowledge of technology. The situation in Bangladesh is very similar to Kessler’s (2006) finding since the teachers were not familiar with the use of e-tools like Facebook, blog, listserv, wiki and Podcast for language learning. According to the theory of social constructivism, new knowledge should be provided to the teachers based on their previous knowledge (Beck and Kosnik, 2006). So, providing teachers with training is important to develop teachers’

professional knowledge. They believed that training on IT would help them to be proficient in using technology for teaching. Their suggestion ranges from basic knowledge of computer to the sophisticated skills like creating blog, developing website, producing podcast and so on. Hagen (1993) determined that the successful execution of new technology into the language classroom requires special pre-condition: support of senior management, a whole-school approach, technology- literate teachers, technician support, a designated language learning accommodation (for example sound proofing) and a budget for staff training, materials development and the purchase of good-quality course material. Sharma & Barret (2007) also said that lack of available fund affects the technology usage in language learning. The factors cover the attitude of teachers and learners to technology, learners' level affecting the appropriate use of technology, teacher training related to novelty of the technology, teachers and learners' availability to access technology, and the cost factor to provide new technology. Hirvela (2006) and Son (2002) emphasizes on these skills for teacher education. Jones (2001) and Egbart et al. (2002) find that teachers' interest to CALL training is often impeded by their administrative and class works.

IJSER

## 7. Summary and Conclusion

### 7.1 Introduction

ICT can be of immense help to a dynamic teacher because it can enhance the dual capacity of both learning and teaching. The present Government of Bangladesh has shown a strong commitment to introduce ICT in all the fields including education. So initiating computer-assisted language program can be a successful beginning of that process. However, it is important to have trained teachers for the implementation of computer-assisted language learning (CALL) program. In Bangladesh, CALL is a quite a new concept and the teachers may not be competent enough to teach CALL program. The schools also may not provide necessary logistics required for CALL. So, this research aims to find the answers of following research questions—

How and to what extent do teachers and students to use technology in teaching and learning processes related to language learning in Bangladesh?

What are the challenges of computer-assisted language teaching and learning in Bangladesh?

What are the prospects of computer-assisted language teaching and learning in Bangladesh?

To explore the answers of these questions two schools were selected randomly. Eight students, three language teachers and one principal from each school were interviewed. The interview was structured based on some interview guides. After collecting all the data, they were analyzed based ethnographic research method and relate with behaviorist and social constructivism theory.

### 7.2 Summary of the findings

The findings put forward that the schools did not provide enough facilities required for CALL program implementations. Among the two schools, one school provides computer and multimedia in 5 classrooms and the other school had one multimedia classroom for English language teaching classes, but the teachers often could not use them because of their unavailability and lack of maintenance. The principals gave positive answers about their infrastructure. They admitted that their facilities were not sufficient for CALL program, but they are trying to give more facilities for language teaching and learning classes. The teachers were not competent enough in using computer and internet. They faced many problems while

working on computer. Most of the teachers denied the fact that Facebook, blog and other social networking sites have been proved to be effective for language teaching in many researches. So, it can be said that the language teachers of higher secondary schools in Bangladesh are not up-to-date with CALL and recent technology. So, it seems that training on CALL is necessary for language teachers. All teachers felt the necessity of training on CALL. Teachers advised to train with CALL experts and IT professional to arrange a successful training program. And also, the principals of schools showed positive attitude towards training program.

### 7.3 Contribution to research

Since CALL is a new concept in Bangladesh there is hardly any research on CALL in Bangladeshi context especially at the higher secondary school. So, this work can be a piece of literature on CALL in Bangladeshi framework. Different issues of e-learning have been discussed in this research. Future researchers can take help from this thesis if they want to work on CALL. The relation between CALL and teacher's education is also emphasized in this thesis that may help the researchers interested in teacher education and teacher educators.

### 7.4 Practical implication

After reading this dissertation, the readers will get introduced with different technological equipment and their role in language teaching and learning. The teachers can use these tools in their language classes. The study emphasizes on the role of school authority in implementing CALL. So, the principals will realize their responsibility if they read this research work. They will also understand teachers' expectations and problems regarding computer assisted language teaching. Some suggestions for CALL training have been proposed here. So, if any school wants to organize training or workshop for their language teachers they can think of these suggestions. The overall situation of CALL at the higher secondary school in Bangladesh is presented in this study. So, the government and policy makers can visualize the actual scenario and take necessary steps for this situation.

### 7.5 Recommendations

Based on the findings, the following suggestions could be considered for the successful implementation of computer assisted language learning and teaching:

The authorities need to rethink about the necessity of technology for language teaching.



They can include the requirement of ICT skill in their job advertisements that will encourage teachers to be ICT literate.

The teachers should propose to the authority to establish required facilities for CALL in lieu of depending on them.

## 7.6 Further studies

This study only focused on two higher secondary schools located one in Dhaka city and another one in Comilla division (rural area). So, further studies can be done on the school situated different area in Bangladesh and can be covered more schools. This study only concentrated two higher secondary schools' students, teachers' and two principal's point of view. Future researchers can include more school students', teachers and principals' opinion in their research. The research focused on the necessity of teacher education and training required for computer assisted language teaching for better language teaching. However, according to Jones (2001), learners' knowledge and training on computer and ICT skills are also important for computer aided language classes. So, one can further research on learners' training of CALL application.

## 7.7 Conclusion

The critical role that technology plays in language classroom is best understood by the term Computer Assisted Language Learning (CALL) (Ehsani and Knodt, 1998). It is the use of computer and related facilities to enhance learning (Ehsani and Knodt). Though CALL started its journey in 1960s based on the theory of behaviorism (Warschauer and Kern, 2000), it is quite a new dimension in Bangladeshi education. According to several researchers (Jones, 2001; Kessler, 2006), successful implementation of CALL requires trained teachers and cooperation of the heads. So, this study endeavored to find out the existing facilities available in Bangladeshi higher secondary schools, the language teachers' knowledge on technology and principals' attitude towards the execution of CALL. At the end of the study, it was found that all the schools did not provide sufficient facilities for CALL and the principals were conscious of this issue. The teachers were also not very aware of the facilities of CALL. Different tools of CALL (like Facebook, blog, podcast and others) were unknown to them. They knew about these tools only as social networking sites and considered them informal and non-academic. However, most of the teachers agreed on the necessity of CALL training, while some teachers tried to refute the idea of training due to workload. When the principals

were asked about this matter, they gave positive responses. They are trying to enrich their institutions with technology, but they have available fund problem. They were willing in arranging training program. However, this study presented some ideas for CALL proposed by the students, teachers and principals. Based on the findings, it can be concluded that in Bangladeshi context, computer aided language teaching will be successful only if schools can arrange available technology enriched classrooms and provide teachers training, other difficulties will demolish automatically.

IJSER

## References:

- Afrin, Naima (2014). Integrating Computer Assisted Instruction in the EFL Classroom of Bangladesh. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*. Volume 19, Issue 11, Ver. IV, PP 69-75.
- Akbar, M. S. (2005). E-learning in developing countries: Challenges and opportunities Bangladesh perspective. *Proceedings of the Second International Conference on E-learning for Knowledge-Based Society*. August 4-7, Bangkok.
- Akhter M. (2012). Computer assisted language teaching (CALT) in Bangladesh at tertiary level. Retrieved from: <http://dspace.ewubd.edu/handle/123456789/663>
- Anderson, G. (1990). *Fundamentals of educational research*. London: The Falmer Press.
- Andersson, A. (2008). Letters from the field: E-learning students change of learning behavior in Sri Lanka and Bangladesh. In Williams, R. and Remenyi, D. (Eds.). *The proceedings of the 7<sup>th</sup> European conference on e-learning*. Pp. 29- 37. UK: Academic Publishing Limited.
- Anwar, B. (2006). *Shikkha Babosthapon Bishoyadi*. Dhaka: Ebong Porkashoni.
- Arthur, J., Waring, M., Coe, R., and Hedges, L.V. (2012) *Research Methods and Methodologies in Education*. London: Sage.
- Arts in Education Institute of Western New York (2002). *Constructivist Learning Theory*. Retrieved January 21, 2008, from, <http://www.artsined.com/teachingarts/Pedag/Dewey.html>
- Atkins, N. E. & Vasu, E. S. (2000). Measuring knowledge of technology usage and stages of concern about computing: A study of middle school teachers. *Journal of Technology and Teacher Education*, 8, 279-302.
- Bangs, P. and Cantos, P. (2004). What can computer assisted language learning contribute to foreign language pedagogy. *International Journal of English Studies-IJES*, Vol. 4 (1), 221-239.
- Barlett-Bragg, A. (2003). Blogging to learn. *Knowledge Tree E-journal*. Retrieved from [http://knowledgetree.flexiblelearning.net.au/edition04/html/blogging\\_to\\_learn.html](http://knowledgetree.flexiblelearning.net.au/edition04/html/blogging_to_learn.html)
- Bates, A. W. (1995). *Technology, Open Learning and Distance Education* London and New York, Routledge, vii + 266 pp.
- Bax, S. (2003). CALL – Past, Present and Future. *System*, 31, 13-28.
- Beatty, K. (2003). *Teaching and researching: Computer-assisted language learning*: Pearson Education.
- Beck, C. and Kosnik, C. (2006). *Innovations in Teacher Education: A Social Constructivist Approach*. Albany: State University of New York press.
- Bednar, Cunningham, Duffy, & Perry (1992). *Theory into practice: How do we link?* Handbook of research for educational communications and technology.
- Bella, M. (2005). Weblogs in education. In B. Hoffman (Ed.). *Encyclopedia of Educational Technology*. Retrieved from <http://edweb.sdsu.edu/eet/articles/blogsined/start.htm>
- Berger, P., & Luckmann, T. (1991). *The Social Construction of Reality. A Treatise in the Sociology of Knowledge*. London: Penguin.
- Birks, M. & Mills, J. (2011). *Grounded Theory: A practical guide*. London: Sage Publications.

- Blattner, G. and Fiori, M. (2009). Facebook in language classroom: promises and possibilities. *International journal of instructional technology and distance learning*, 6(1), 17-28.
- Bloor, M. et al. (2001). *Focus groups in social research*. London: Sage.
- Breidlid, A. (2005c). Ngugi's Matigari, a Non-Materialist Discourse and Post-Modernism. *The Australian Journal of Trans-national Writing*. Volume 1, February 2005.
- Breidlid, A. (2013). *Education, Indigenous Knowledges, and Development in the Global South. Contesting Knowledges for a Sustainable Future*. New York. Routledge
- Broadribb, S., Peachey, A., Chris, C. and Westrap, F. (2009). Using Second Life at the Open University: How the Virtual World Can Facilitate Learning for Staff and Students. In C. Wankel and J. Kingsley. *Higher education in Virtual World: Teaching and Learning in Second Life* (pp. 204-218). Bingley: Emerald Publishing.
- Brown, T. H. (2006). Beyond constructivism: Navigation in the knowledge era. *On the Horizon*, 14(3), 108-118. Retrieved June 8, 2008, from ProQuest database.
- Bryman, A. (2008). *Social research methods*. 3<sup>rd</sup> edition. Oxford: Oxford University Press.
- Bryman, A. (2016). *Social research methods*. 5<sup>th</sup> edition. Oxford: Oxford University Press.
- Bugeja, M. (2008). Second Thoughts about Second Life. *Education Digest*, 73(5), 18- 22.
- Bullen, M. (1997). *A Case Study of Participation and Critical Thinking in a University-Level Course Delivered by Computer Conferencing*. Unpublished doctoral dissertation. University of British Columbia, Vancouver, Canada.
- Bush, G. (2006). Learning about learning: from theories to trends. *Teacher Librarian*, 34(2), 14- 19.
- Campbell, A. P. (2003). Weblogs for use with EFL classes. *The Internet TESL Journal*, 9(2). Retrieved from <http://iteslj.org/Techniques/Campbell-Weblogs.html>
- Carter, B. and Elseth, D. (2009). The usefulness of Second Life for language learning. In R. C. V. Mariott and P. L. Torres. (Eds.). *Handbook of Research on E- Learning Methodologies for Language Acquisition* (pp. 443-455). New York: Information Science Reference.
- Casey, M.A. & Kueger, R.A. (2000). *Focus groups: A practical guide for applied research*. (3rd ed.). Thousand Oaks, CA: Sage.
- Charmaz, K. (2006). *Constructing grounded theory: A Practical Guide Through Qualitative Analysis*. Great Britain: SAGE Publications Inc.
- Chartrand, R. and Pellowe, B. (2007). ELTpodcast.com – A podcast and website for students and teachers of English language. *Proceedings of the 1<sup>st</sup> International Wireless Ready Symposium on Podcasting Education and Mobile Assisted Language Learning*. ISSN 1995-4557, <http://wirelessready.nucba.ac.jp/e proceedings2007.html>
- Chilisa, B. (2012). *Indigenous Research Methodologies*. Los Angeles: Sage.
- Chun, D. M. and Plass, J. L. (2000). Networked multimedia environment for second language acquisition. In M. Warschauer and R. Kern. (Eds.). *Network-based Language Teaching: Concepts and Practice* (pp. 151-170). Cambridge: Cambridge University press.
- Coffman, T. and Klinger, M. B. (2007). Utilizing virtual world for education: The implication for practice. *International Journal of Human and Social Science*, 2(1), 29-33.

- Cohen, L. & Manion, L. (2011). *Research methods in education*. (7th ed.). London: Routledge.
- Cohen, L. & Manion, L. (2018). *Research methods in education*. (8th ed.). London: Routledge.
- Creswell, J. W. (2009). *Research design qualitative, quantitative, and mixed methods approach* (Third). United States of America: SAGE Publications, Inc.
- Danley, James, Mims & Simms (2014) *Behaviorism Theory And Its Relation to Instructional Design*. Retrieved from [http://faculty.mercer.edu/codone\\_s/tco363/2014/behaviorism.pdf](http://faculty.mercer.edu/codone_s/tco363/2014/behaviorism.pdf)
- Darkenwald, G. & Merriam, S. B. (1982). *Adult education: Foundations of practice*. Cambridge: Harper & Row.
- Dashtestani, R. (2012). Barriers to the implementation of CALL in EFL courses: Iranian EFL teachers' attitudes and perspectives. *The JALT call Journal 2012: Regular Papers*, 8, 55–70.
- Dawson, S. et al. (1993). *A manual for the use of focus groups*. International Nutrition for Developing Countries (INDFC).
- Denscombe, M. (2007). *The good research guide for small-scale social research projects*. (3rd ed.). New York: McGraw-Hill.
- Denzin, N. K. and Lincoln, Y. S. (2008). *Strategies of Qualitative Inquiry* (3rd ed.). Thousand Oaks, CA: Sage.
- Dewey, J. (1938). *Experience and Education*. New York, NY: The MACMILLAN Company.
- Dudeney, G. and Hockly, N. (2007). *How to Teach English with Technology*. Essex: Pearson Longman.
- Eastment, D. (2005). Blogging. *ELT Journal*, 59(4), 358-361.
- Eaton, S. T. (2010). How to use Skype in ESL/EFL classroom. *The Internet TSL Journal*, 16(11). Retrieved from <http://iteslj.org/Techniques/Eaton-UsingSkype.html>
- Ebsworth, M. E., Feknous, B., Loyet, D. and Zimmerman, S. (2004). Tape it yourself: Videotape for teacher education. *ELT Journal*, 58(2), 145-154.
- Egbart, J., Paulus, T. and Nakamichi, Y. (2002). The impact of CALL institution on language classroom technology use: A foundation for rethinking CALL teacher education. *Language Learning and Technology*, 6 (3), 108-129.
- Ehsani, F. and Knodt, E. (1998). Speech technology in computer assisted language learning: Strengths and limitations of a new CALL paradigm. *Language Learning and Technology*, 2(1), 54-73.
- Erban, T., Ban, R. and Castaneda, M. (2009). *Teaching English Language Learners Through Technology*. New York: Routledge.
- Eslami-Rasekh, Z. (2005). Raising the pragmatic awareness of language learners. *ELT Journal*, 59(3), 199-208.
- Fisher, P. (2008). learning about literacy: from theories to trends. *Teacher Librarian*, 35(3), 8-13.
- Fosnot, C.T. (1996). *Constructivism: Theory, perspectives, and practice*. New York: Teachers College Press.

- Fotos, S. and Browne, C. (2004). The development of CALL and current options. In S. Fotos and C. Browne. (Eds.). *New Perspective on CALL for Second Language Classroom* (pp. 3-12). New Jersey: Lawrence Erlbaum Associates.
- Gadomski, A. M. (1997). *Global TOGA Meta-Theory*. The page since 1997, Last small updating May. 2007, 2008. Retrieved from <http://erg4146.casaccia.enea.it/wwwerg26701/Gad-toga.htm>
- Gadomski, A. M. (2002). *High-Intelligence Paradigms*. Retrieved from <http://erg4146.casaccia.enea.it/HID/HI-def.htm>
- Gardner, D. and Miller, L. (1999) *Establishing Self-Access Center*. Cambridge: Cambridge University Press.
- Geijsel, F. P., Slegers, P., Stoel, R. D. and Kruger, M. L. (2009). The effect of teacher psychological and school organizational and leadership factors on teachers' professional learning in Dutch schools. *The Elementary School Journal*, 109(4), 406-426.
- Gesche, A. (2009). *Adapting To Virtual Third Space Language Learning Futures*. In R. C. V. Mariott and P. L. Torres. (Eds.). *Handbook of Research on E- Learning Methodologies for Language Acquisition* (pp. 524-538). New York: Information Science Reference.
- Gibbs, A. (1997). Focus groups. *Social Research Update*, Issue 99, Winter 1997.
- Glaser, B. G. and Strauss, A. L. (1967). *The Discovery of Grounded Theory*. Chicago, IL: Aldane.
- Global Education Monitoring Report (2017/8)*. UNESCO, 2017. Paris 07 SP, France. Retrieved from: [www.unesco.org/gemreport](http://www.unesco.org/gemreport)
- Godwin-Jones, R. (2003). *Emerging Technologies: Blog and Wikis: Environment for Online Collaboration*. *Language Learning and Technology*, 7(2). 12-16. Retrieved from <http://llt.msu.edu/vol7num2/emerging>.
- Gonzalez, J.C. (n.d.). *Constructivism vs. direct Instruction*. Retrieved January 21, 2008, from, Harlandale Masters On-Line.
- Gorman, G.E.& Clayton, P. (2005). *Qualitative research for the information professionals: A practical handbook*. London: Facet Publishing.
- Goulding, C. (1999). Consumer research, interpretive paradigms and methodological ambiguities, *European Journal of Marketing*, Vol. 33 Issue: 9/10, pp.859-873, <https://doi.org/10.1108/03090569910285805>
- Green, C. and Tanner, R. (2005). Multiple intelligences and online teacher education. *ELT Journal*, 59(4), 312-321.
- Greener, I. (2011). *Designing social research: a guide for the bewildered?* London or Cornwall: Sage Publications Inc.
- Gunduz, N. (2005). Computer Assisted Language (CALL). *Journal of Language and Linguistic Studies*, 1(2), 193-214.
- Gusterson, H. (2008). *Ethnographic Research*. In Klotz, A & Prakash, D. (Eds.), *Qualitative methods in International Relations: A pluralistic guide*. (pp. 93-113). NY: Palgrave Macmillan
- Hagen, S. ed. (1993). *Using Technology in Language Learning*. London: City Technology College Trust Limited.
- Hammersley, M. (2007). *Ethnography: problems and prospects*. *Evidence and Policy*, 1 (1), pp. 1-16.

- Harman, G. (2008). Mechanical mind. *American Scientist*, 96(1), 76-79.
- Hemingway, C. J., & Gough, T. G. (1998). A socio-cognitive theory of information systems. RESEARCH REPORT SERIES-UNIVERSITY OF LEEDS SCHOOL OF COMPUTER STUDIES LU SCS RR, (25), All-All, Retrieved from [https://www.engineering.leeds.ac.uk/computing/research/publications/reports/1998/1998\\_25.pdf](https://www.engineering.leeds.ac.uk/computing/research/publications/reports/1998/1998_25.pdf)
- Hirvela, A. (2006). Computer-mediated communication in ESL teacher education, *ELT Journal*, 60(3), 233-241.
- Hjoerland, B. (2004). Domain Analysis: A Socio-Cognitive Orientation for Information Science Research. *Bulletin of the American Society for Information Science and Technology*, 30(3), 17-21. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/bult.312/full>
- Holtman, L. (2009). Using Wikis in the teaching of a short course on history and philosophy of science. *International Journal of Instructional Technology and Distance Learning*, 6(1), 29-37.
- Horvath, J. (2009). Hungarian students' blog in EFL: Shaping language and social connection. *TESL-EJ*, 12(4). Retrieved from <http://www.cc.kyoto-su.ac.jp/information/tesl-ej/ej48/int.html>
- Hugman, R., Pittaway, E. & Bartolomei, L. (2011). When 'Do No Harm' Is Not Enough: The Ethics of Research with Refugees and Other Vulnerable Groups. *The British Journal of Social Work*, Volume 41, Issue 7, October 2011, Pages 1271–1287, <https://doi.org/10.1093/bjsw/bcr013>
- Islam, M. T. and Selim, A. S. M. (2006a). Current status and prospect for e-learning in the promotion of distance education in Bangladesh. *Turkish Online Journal of Distance Education-TOJDE*, 7 (1), Retrieved from <http://tojde.anadolu.edu.tr/tojde21/articles/islam.htm>
- Islam, M. T. and Selim, A. S. M. (2006b). Information and Communication Technology for the promotion of open and distance learning in Bangladesh. *Journal of Agriculture and Rural Development*, 4(1), 35-42
- Islam, S. (11 july, 2018). Dhaka Tribune. Retrieved from <https://www.dhakatribune.com/bangladesh/2018/07/11/digital-bangladesh-a-reality-now>.
- Johnson, J. A., Musial, D., Hall, G. E., Gollnick, D. M., & Dupuis, V. L. (2008). *Foundations of American education: Perspectives on education in a changing world* (14th ed.). Boston, MA: Pearson Education Inc.
- Jones, J. F. (2001). CALL and Responsibilities of Teachers and Administrators. *ELT Journal*, 55(4), 360-367.
- Jones, P. W., (2007). Education and world order. *Comparative Education*, 43:3, 325-337, DOI: 10.1080/03050060701556273
- Karl, L. C. (2011). *Elementary Teachers' Perceptions of Technology Proficiencies and Motivation to Integrate Technology in School Curriculum*. Washington: Walden University Press.
- Kasper, G. and Rose, K. (2003). *Pragmatics development in a second language*. Oxford: Blackwell.

- Kavaliauskiene, G., Anusiene, L. and Maziukiene, V. (2006). Weblogging: Innovation for Communication in English. *Electronic Journal of Foreign Language Teaching*, 3(2), 220-233.
- Kern, R. and Warschauer, M. (2000). Theory and practice of networked-based language teaching. In M. Warschauer and R. Kern. (Eds.), *Network-based Language Teaching: Concepts and Practice* (pp. 1-19). Cambridge: Cambridge University Press.
- Kern, R. and Warschauer, M. (2000). Theory and practice of networked-based language teaching. In M. Warschauer and R. Kern. (Eds.), *Network-based Language Teaching: Concepts and Practice* (pp. 1-19). Cambridge: Cambridge University Press.
- Kessler, G. (2006). Assessing CALL Teacher Training: What are we doing and what could we do better. In P. Hubbard and M. Levy. (Eds.). *Teacher Education in CALL* (pp. 23-44). Philadelphia: John Benjamin.
- Khan, H. R. (2005). Perception of trainee teachers: Implication for effective teaching of English. *Stamford Journal of English*, 1 (summer 2005), 119-130.
- Khan, M. E. & Manderson, L. (1992). Focus groups in tropical diseases. *Research Health Policy and Planning*, Vol.7, No.1. 198 *Pakistan Journal of Social Sciences* Vol. 33, No. 1
- Khan, M.E. et al. (1991). The use of focus groups in social and behavioural research: Some methodological issues. *World Health Statistics Quarterly*, Vol. 414. Kitzinger, J. (1997). Introducing focus groups. *British Medical Journal*, Vol.311, 29 July.
- Kim, H. k. (2008). Beyond Motivation: ESL/EFL Teachers Perceptions of the Role of Computers. *CALICO Journal*, 25, 241-259.
- Kitzinger, J. (1995). *Qualitative Research: Introducing Focus Groups*. Retrieved from: <https://www.researchgate.net/publication/15566389>, DOI: 10.1136/bmj.311.7000.299.
- Kluge, S. and Riley, L. (2008). Teaching in Virtual Worlds: Opportunities and Challenges. *Issues in Informing Science and Information Technology*, 5. Retrieved from <http://proceedings.informingscience.org/InSITE2008/IISITv5p127-135Kluge459.pdf>
- Knobel, M., Lankshear, C., Honan, E. and Crawford, J. (1998). The weird world of second language education. In I. Snyder. (Ed). *Page to Screen: Taking Literacy into the Electronic Era* (pp. 21-52). London: Routledge.
- Krueger, R. (1998). *Focus group: A practical guide for applied research*, London, Sage.
- Kruse, G. D. (1998). Cognitive science and its implications for education. *NASSP Bulletin*, 82 (598), 73-79.
- Kvale, S. & Brinkmann, S. (2009). *Interviews: Learning the Craft of Qualitative Research Interviewing*. (2nd ed.) Thousand Oaks, Calif.: Sage.
- Kvale, S. & Brinkmann, S. (2015). *Interviews: Learning the Craft of Qualitative Research Interviewing*. (3rd ed.) Thousand Oaks, Calif.: Sage.
- Lai, C. and Kritsonis, W. A. (2006). The advantages and disadvantages of computer technology in second language acquisition. *Doctoral Forum*, 3(1).
- Lai, C. and Kritsonis, W. A. (2006). The advantages and disadvantages of computer technology in second language acquisition. *Doctoral Forum*, 3(1).
- Lam, Y. (2000). Technophilia vs. technophobia: A preliminary look at why second- language teachers do or do not use technology in their classrooms. *Canadian Modern Language Review*, 56, 389-420.



- Leahey, T. H. (2000). Control: A history of behavioral psychology. *The Journal of American History*, 87(2), 686-687.
- Lee, M.J.W., McLoughlin, C. and Chan, A. (2007). Talk the talk: Learner-generated podcast as a process for knowledge creation. *British Journal of Educational Technology*. 39(3), 501-521, doi: 10.1111/j.1467-8535.2007.00746.x
- Lee, K. W. (2000). English teachers' barriers to the use computer-assisted language learning. *The Internet TESL Journal*, 6(12), Retrieved from <http://iteslj.org/Articles/Lee-CALLbarriers.html>
- Leffa, V. J. (2009). CALL as Action. In C. V. Mariott and P. L. Torres. (Eds.). *Handbook of Research on E-learning Methodologies for Language Acquisition* (pp. 39-52). New York: Information Science Reference.
- Levy, M. (2008). Effective Use of CALL Technologies: Finding the Right Balance. In R.P Donaldson and M.A. Haggstrom. (Ed.). *Changing Language Education Through CALL* (pp. 1-18). New York: Routledge.
- Levy, M. (1997). *Computer-Assisted Language Learning: Context and Conceptualization*. New York: Oxford University Press.
- Mahrooqi A. R. & Troudi S. (2014). *Using Technology in Foreign Language Teaching*. Cambridge Scholars Publishing. Retrieved from: <https://www.researchgate.net/publication/274380451>
- Malcolm, D. (2004). Why should learners contribute to self-access center. *ELT Journal*, 58(4), 346-354.
- Marshall, C. & Rossman, G. B. (2011). *Designing qualitative research* (Fifth ed.). United States of America: SAGE Publications, Inc.
- Maxwell, J. A. (2010). *Using Numbers in Qualitative Research*, Volume: 16 issue: 6, page(s): 475-482, [Doi.org/10.1177/1077800410364740](https://doi.org/10.1177/1077800410364740)
- Maxwell, J. A. (2013). *Qualitative research design : an interactive approach* (3rd ed. ed. Vol. 41). Los Angeles: Sage.
- Mayall, B. (2008). Conversations with children: Working with generational Issues. In P. Christensen & A. James (Eds.), *Research with children Perspectives and Practices* (Second Eds.). Great Britain: Routledge.
- Mazer, J. P., Murphy, R. E., & Simmonds, C. J. (2007). I'll see you on "Facebook": The effects of computer-mediated teacher self-disclosure on student motivation, affective learning, and classroom climate. *Communication Education*, 56(1), 1-17.
- Merton, R.K. et al. (1990). *The focused interview*. New York: Free Press.
- Miller, L., Shuk-Ching, E. T. and Hopkins, M. (2007). Establishing a self-access center in secondary school. *ELT Journal*, 61(3), 220-227.
- Mills, J. A. (1998). *Control. A history of behavioral psychology!* New York, NY: New York University Press.
- Morgan, D.L. (1997). *Focus groups as qualitative research*. Newbury Park: Sage.
- Morgan, D.L. & Krueger, R.A. (1993) When to use focus groups and why. In D.L. Morgan (ed.). *Successful focus groups: Advancing the state of the art*. Newbury Park: Sage.
- Morrison, G. R., Ross, S. M., & Kemp, J. E. (2004). *Design effective instruction*. Wiley Jossey- Bass. Hoboken, NJ.

- Nagel, P. S. (1999). Email in the virtual ESL/EFL classroom. *The Internet TSL Journal*, 5(7), retrieved on September 23, 2011 from <http://iteslj.org/Articles/Nagel-Email.html>
- National Education Policy (2010). Ministry of Education, Government of the People's Republic of Bangladesh
- NCATE. (2008). Professional standards for the accreditation of teacher preparation institutions. Retrieved from <http://www.ncate.org/Standards/NCATEUnitStandards/tabid/123/Default.aspx>
- Newman, D. R., Webb, B., & Cochrane, C., (1995). A content analysis method to measure critical thinking in face-to-face and computer supported group learning. *Computing and Technology: An Electronic Journal for the 21st Century*, 3(2), 56-77.
- O'Sullivan, P. B., Hunt, S. K., & Lippert, L. R. (2004). Mediated immediacy: A language of affiliation in a technological age. *Journal of Language and Social Psychology*, 23, 464-490.
- Overskeid, G. (2008). They should have thought about the consequences: The crisis of cognitivism and a second chance for behavior analysis. *The Psychological Record*, 58(1), 131-152.
- Park, C. N. & Son, J. B. (2009). Implementing Computer-Assisted Language Learning in the EFL Classroom: Teachers' Perceptions and Perspectives. *International Journal of Pedagogies and Learning*, 5, 1-25.
- Patra, C. C., Alam, M. Z. and Sobhan, M.A. (2010). Wimax Network Deployment for ICT Based E-Learning in Bangladesh: Challenges and Recommendation. *International Journal of Information System and Telecommunication Engineering*, 1(1), 39-46.
- Patton, M.Q. (2002). *Qualitative evaluation and research methods*. (3rd ed.). Thousand Oaks, CA: Sage.
- Pellettieri, J. (2000). Negotiation in cyberspace: The role of chatting in the development of grammatical competence. In M. Warschauer and R. Kern. (ed.). *Network-based Language Teaching: Concepts and Practice* (pp. 59-86). Cambridge: Cambridge University press.
- Pisel, K. (1995). An analysis of distance learning applications for joint training. *Journal of Interactive Instruction Development*. Summer, pp. 12-23.
- Pouzevara, S. L. and Khan, R. (2007). Learning communities enabled by mobile technology: A case-study of school based in-service secondary teacher training in rural Bangladesh. Technical Assistance Consultant Report. Project no. ADB TA, 6278-REG.
- Pozzobon, C. (2008). Podcast and Literature. *Entre Lenguas*, 13, 111-115.
- Pritchard, A. and Wollard, J. (2010). *Psychology for Classroom: Constructivism and Social Learning*. New York: Routledge.
- Pritchard, A., & Woollard, J. (2010). *Psychology for the classroom: Constructivism and social learning*. New York.
- Quader, D. A. (2005). Teachers training for teachers of English: A project of National University. *Journal of the Institute of Modern Language*, 17 and 18, 1-27.
- Rahman, A. (1998). English teaching in Bangladesh: Problems and Prospects. *Journal of the Institute of Modern Language*, 8, 95-101.
- Randall, M. and Thornton, B. (2001). *Advising and Supporting Teachers*. Cambridge: Cambridge University Press.

- Reeves, T. C. (1998). The impact of media and technology in schools: A research report Prepared for The Bertelsmann Foundation [Supplemental Material]. Athens Academy. Retrieved from [http://www.athensacademy.org/instruct/media\\_tech?reeves0.html](http://www.athensacademy.org/instruct/media_tech?reeves0.html)
- Rice, P. L. & Ezzy, D. (1999). *Qualitative research methods: A health focus* Oxford: Oxford University Press.
- Ritchie, J. & Lewis, J. (2003). *Qualitative Research Practice. A Guide for Social Science Students and Researchers*. London/Thousand Oaks/ New Delhi: Sage, 336 Seiten, ISBN 0-7619-7110-6 (pbk), GBP 21,75/EUR 36,90
- Robinson, J. (2010). Awesome insights into semantic variation. *Advances in Cognitive Sociolinguistics*, 45, 85. Retrieved from <http://books.google.com>
- Robertson, E. B.; Ladewig, B. H.; Strickland, M. P., & Boschung, M. D. (1987). Enhancement of self-esteem through the use of computer-assisted instruction. *Journal of Educational Research*, 80 (5), 314-316.
- Rotfeld, H. H. (2007). Theory, data, interpretations, and more theory. *The Journal of Consumer Affairs*, 41(2), 376-380.
- Rummel, E. (2008). Constructing cognition. *American Scientist*, 96(1), 80-82. Shield, G. (2000). A critical appraisal of learning technology using information and communication technologies. *Journal of Technology Studies*.
- Said, Edward (2003). *Orientalism*. Penguin Group, London.
- Schewinhorst, K. (2002). Evaluating tandem language learning in the MOO: Discourse repair strategies in a bilingual internet project. *Computer Assisted Language learning*, 15(2), 135-145.
- Scheyvens, R. & Storey, D. (2003). *Development Fieldwork: A Practical Guide*. (R. Scheyvens & D. Storey Eds.). Padstow, Cornwall: Sage Publications.
- Scheyvens, R., Nowak, B. and Scheyvens H. (2003). Ethical Issues. In Scheyvens, R., Nowak, B. and Scheyvens H. (eds.) *Development Fieldwork. A Practical Guide*, London: SAGE Publications, pp. 139-166.
- Scheyvens, R., Murray, W. E., & Scheyvens, H. (2003). Working with Marginalised, Vulnerable or Privileged Groups. In R. Scheyvens & D. Storey (Eds.), *Development Fieldwork: A Practical Guide*. London: SAGE Publications.
- Schreiber, D. A. (1998). How to Maximize Use of Technology and Institutionalize Distance Learning Efforts. 14 th Annual Conference on Distance Teaching and Learning. August 5-7. Marriott, Madison West, Madison, WI: University of Wisconsin System.
- Seileek, A., (2004). Designing a computer-assisted language learning (CALL) program and testing its effectiveness on students' writing ability in English. Ph.D. Thesis, Amman Arab University for Graduate studies, Amman – Jordan.
- Sharma, P. and Barret, B. (2007). *Blended Learning: Using technology in and beyond the language classroom*. Oxford: Macmillan Education.
- Sherblom, J. C., Withers, L. A. and Leonard, L. G. (2009). Communication challenges and opportunities for educators using second life. In C. Wankel and J. Kingsley. (Eds.) *Higher Education in Virtual World: Teaching and Learning and in Second Life* (pp. 29-46).. Bingley: Emerald Group Publishing Ltd.
- Shield, G. (2000). A critical appraisal of learning technology using information and communication technologies. *Journal of Technology Studies*.

- Simpson, J. (2002). Computer-mediated Communication. *ELT Journal*, 56 (4), 414-415.
- Simpson, J. (2002). Computer-mediated Communication. *ELT Journal*, 56 (4), 414- 415.
- Skinner, B. F. (1948). *Walden Two* Indianapolis, IN: Hackett Publishing Company.
- Sternberg, R. Applying psychological theories to educational practice. *American Education Research Journal*, 45(1), 150-166).
- Smith, E. (2012). Secondary data. In J. Arthur. M. Waring, R. Coe and L. V. Hdeges (eds) *Research Methods and Mehtologies in Education*. London: Sage, pp. 125-30.
- Smythe, S. and Neufeld, P. (2010). "Podcast Time". Negotiating digital literacies and communities of learning in amiddle years ELL classroom. *Journal of Adolescent and Adult Literacy*. 53(6), 488-496, doi: 10.1598/JAAL.53.6.5
- Soares, D. A. (2008). Understanding class blogs as a tool for language development. *Language Teaching Research*, 12(4), 517-533.
- Son, J. B. (2002). Online discussion on a CALL course for distance language teachers. *CALICO Journal*, 20(1), 127-144.
- Sotillo, S.M. (2000). Discourse function and syntactic complexity in synchronous and asynchronous communication. *Language Learning and Technology*, 4(1), 82- 119.
- Stewart, D.W. & Shamdasani, P. N. (1990). *Focus groups: Theory and practices*. Newbury Park: Sage.
- Sultana, S. F. (2005). Towards organizing a teacher development movement: Bangladesh perspective. *Stamford Journal of English*, 1, 69-76.
- Sutton, L. (2000). Vicarious interaction in a course enhanced through the use of computer-mediated communication. Unpublished doctoral dissertation, Arizona State University, Tempe.
- Swertz, C., Schultz, R. and Toifl, K. (2009). Language Teaching in Live Online Environments. In R. C. V. Mariott and P. L. Torres. (ed.). *Handbook of Research on E-Learning Methodologies for Language Acquisition* (pp. 509- 523). New York: Information Science Reference.
- Taylor, R. & Gitsaki, C. (2003) Teaching well and loving it. In Fotos & Browne (Ed.), *New perspectives on CALL for second language classrooms* (pp. 131-147). Mahwah, NJ: Lawrence Erlbaum Associates.
- Taylor, R. and Gitsaki, C. (2004). Teaching well and loving IT. In S. Fotos and C. Browne. (Eds.). *New Perspective on CALL for Second Language Classroom* (pp. 131-14). New Jersey: Lawrence Erlbaum Associates.
- Timucin, M. (2006). Implementing CALL in an EFL Context. *ELT Journal*, 60(3), 262-271.
- Tucker, V. (1999). The Myth of Development: A Critique of the Eurocentric Discourse. In R. Munck and D. O'Hearn (eds). *Critical Development Theory – contributions to a new paradigm*. London: Zed Books.
- Van Dijk, T. A. (2009). *Critical Discourse Studies: A Sociocognitive Approach*. Retrieved from <http://www.discourses.org/OldArticles/Critical%20discourse%20studies.pdf>
- Vavrus, F., (2009). The cultural politics of constructivist pedagogies: Teacher education reform in the United Republic of Tanzania. *International Journal of Educational Development*, 29: 303-311.
- Veer, E. A. V. (2010). *Facebook: The Missing Manual*. Sebastopol: O'Reilly Media.

- Vygotsky, L. (1978). *Mind in Society: The Development of Higher Psychological processes*. Harvard: Library of Congress.
- Wakefield, J. C. (2007). Is behaviorism becoming a pseudoscience? Replies to Drs. Wyatt, Midkiff and Wong. *Behavior and Social Issues*, 16(2), 170-190.
- Warschauer, M. (1996). Comparing face to face and electronic discussion in second language classroom. *CALICO Journal*, 13(3), 7-26.
- Warschauer, M. (1996). Motivational aspects of using computers for writing and communication. *Telecollaboration in foreign language learning*, 29-46.
- Warschauer, M. (2000). "CALL for the 21st Century" IATEFL and ESADE Conference, 2 July 2000, Barcelona, Spain. Retrieved from <http://www.gse.uci.edu/markw/cyberspace.html>.
- Warschauer, M. (2002). A Developmental Perspective on Technology in Language Education Author. *TESOL Quarterly*, 36, 453-475.
- Warschauer M., Zheng B., Niiya M., Cotton S. & Farkas G. (2014). Balancing the One-To-One Equation: Equity and Access in Three Laptop Programs. *EQUITY & EXCELLENCE IN EDUCATION*, 47(1), 46–62, 2014, University of Massachusetts Amherst School of Education, DOI: 10.1080/10665684.2014.866871
- Warschauer, M. & Kern, R. (2000). Theory and practice of network-based language teaching. In M. Warschauer & R. Kern (Eds.), *Network-based language teaching: Concepts and practice*. New York: Cambridge University Press.
- Watson, J. B. (1930). *Behaviorism* (rev. ed.). Chicago: University of Chicago Press.
- Webb, J. L. (2007). Pragmatism (Plural) part I: Classical pragmatism and some implications for empirical inquiry. *Journal of Economic Issues*, 41(4), 1063-1087.
- WGBH (1998). A science odyssey: People & discoveries. Retrieved May 20, 2008, from, <http://www.pbs.org/wgbh/aso/databank/entries/bhskin.html>
- Weininger, M. and Shield, L. (2001). Orality in MOO: Rehearsing Speech in Text: A Preliminary Study. In K. Cameron. (Ed.). *CALL—The Challenge of Change* (pp. 89-96). Exeter: Elm Bank Publication.
- Wellington, J. (2015). *Educational Research: Contemporary Issues and Practical Approaches* (Second ed.). London: Bloomsbury Academic.
- Wesley, B. E., Krockover, G. H., & Hicks, C. R. 1985. Locus of control and acquisition of computer literacy. *Journal of Computer-Based Instruction*, 12(1), :12-16.
- Wisker, G. (2001). *The postgraduate research handbook*. U.K.: Palgrave.
- Wood, E. (2006). The Ethical Challenges of Field Research in Conflict Zones. *Qualitative Sociology*, 29(3), 373-386. doi:10.1007/s11133-006-9027-8
- Yarbrough, J. R. (2019). Adapting adult learning theory to support innovative, advanced, online learning - WVMD Model. *Research in Higher Education Journal*, Volume 35. Retrieved from: <http://www.aabri.com/manuscripts/182800.pdf>
- Yasmeen, S. (2005). Theoretical approaches to teacher education and supervision. *Harvest*, 20, 111-120.

## Interview guides focus group interview

- ◆ How and what purpose do you use your computer or smartphone?
- ◆ How does technology help you in English Language learning process?
- ◆ What do you think using technology for language learning?
- ◆ How do you use internet at home or school?
- ◆ How does mobile based internet help you in English language learning?
- ◆ How does online chatting develop your English language learning?
- ◆ Which program helps you more in your English language learning process?
- ◆ How do you feel internet materials to be easier and more realistic than physical materials in your English language learning?
- ◆ What do you think using social network for language learning?
- ◆ How do you use language website for English language learning?
- ◆ How does language teacher influence you to use technology in language learning?
- ◆ How do you follow your teachers' instructions on using computer for language learning?
- ◆ How do you distract or divert from a particular search of English language learning using internet?
- ◆ How do you suggest improving computer-assisted language teaching and learning?
- ◆ What are the possibilities for future language learning? Please explain.

## **Interview guides for individual interview (Teachers)**

- ⇒ What kind of technologies do you use in the classroom for language teaching and for what purpose?
- ⇒ Which Computer-Assisted Language Learning (CALL) programme do you use in your language teaching?
- ⇒ How do you design computer assisted activity for students' language learning class? Please explain?
- ⇒ How technologies can help English as a Foreign language (EFL) learners in teaching?
- ⇒ What kind of training or workshop will be helpful for the teachers to introduce them with Computer Assisted Language Learning (CALL)?
- ⇒ How do you manage your self-access center or language lab' necessity in the school?
- ⇒ What type of homework do you give students for which might need to take help of technologies?
- ⇒ What kind of conflict like Religious restriction or Social constraints among students using web based programme and how do you overcome?
- ⇒ How do you experiencing using computer or other logistics in language classes?
- ⇒ What is your suggestion to improve computer-assisted language teaching and learning?
- ⇒ If I ask you for future language teaching and learning situation of Bangladesh, how do you evaluate it? Please explain.

## Interview guides for individual interview (Heads)

- How do you evaluate Computer Assisted Language Learning (CALL) in English as a Foreign Language (EFL) classes in Bangladesh?
  - What do you think about infrastructure for CALL programme?
  - If the teachers demand for more logistic support for computer assisted language course, will the school fulfill that demand? Why or why not?
- What skills do you focus, when you appoint a teacher for English language department?
- What kind of training can improve your teachers' computer skill to teach better in EFL class?
- If you find that the teachers perform better after training, will you be interested to arrange any kind of training for the teachers? Please explain.
- What kind of opportunity do you have to use computer or any other devices in English Language class (Teachers and students)?
- How do you experiencing using technology in English language classes?
- What is your suggestion to improve computer-assisted language learning?
- What are the possibilities for future language learning? Please explain.



## Participants list

Name code	School name	Age	
SA1	School A	17	Focus group interview 1 with girls from School A were all first year higher secondary business studies group.
SA2	School A	16	
SA3	School A	17	
SA4	School A	18	
SA5	School A	18	Focus group interview 2 with boys from School A were all first year higher secondary humanities group.
SA6	School A	17	
SA7	School A	19	
SA8	School A	16	
SB1	School B	16	Focus group interview 3 with girls from School B were all first year higher secondary level.
SB2	School B	18	
SB3	School B	17	
SB4	School B	17	
SB5	School B	18	Focus group interview 2 with boys from School B were all first year higher secondary humanities group
SB6	School B	16	
SB7	School B	17	
SB8	School B	17	
TA1	School A	40	3 Individual interviews from school A and all are language teachers. They are all masters in English.
TA2	School A	29	
TA3	School A	25	
TB1	School B	28	3 Individual interviews from school B and all are language teachers. They are all masters in English.
TB2	School B	45	
TB3	School B	50	
HA1	School A	52	2 Individual interviews for the Heads of School A & B. They are experienced and Masters.
HB1	School B	49	



9

<sup>9</sup> <https://en.wikipedia.org/wiki/Portal:Bangladesh/Map#/media/File:Un-bangladesh.png>