

**THE IMPACT OF COMPUTER ASSISTED LANGUAGE
LEARNING (CALL) AND MOBILE ASSISTED LANGUAGE
LEARNING (MALL) IN ENHANCING SECOND LANGUAGE
LEARNING IN NIGERIAN SCHOOLS.**

by

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LIST OF ABBREVIATIONS

CAI :	Computer Assisted Instruction
CALL:	Computer Assisted Language Learning
CALICO:	Computer Assisted Language Instruction Consortium
ESL:	English as Second Language
EUROCALL:	European Association for Computer Assisted Language Learning
IALLT:	International Association for Language Learning
ICT:	Information Communication Technology
IT:	Interactionist Theory
JALT CALL:	Japan Association for Language Teaching Computer Assisted Language Learning
APACALL:	Asia -Pacific Association for Computer Assisted Language Learning
NNS:	Non-native Speaker
NS:	Native Speaker
CMC:	Computer-Mediated Communication
SLA:	Second Language Acquisition
MALL:	Mobile Assisted Language Learning
WWW:	World Wide Web
VR:	Virtual Reality

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The roles of Information Communication Technology (ICT) in a trend of English Language teaching and learning are enormous (Al Jarf, 2007). These include globalisation of the teaching and learning of English Language, the use of technology to make teaching and learning of English as a Second Language communicative and functional and the development of the trendy English Language teacher. As demonstrated by Aborisade (2005), teaching, and learning opportunities can be expanded through appropriate application of technology. Hence, new teaching ideas are being tried out to enhance effective teaching and learning in this age of technology, and as a result, the 21st century has witnessed diverse technological innovations with regard to approaches to teaching and learning (Okebukola,1997). Notable among the innovations specifically targeted at language learning is computer-assisted language learning (CALL), which draws upon the involvement of computer scientists, engineers, linguists, experts in artificial intelligence, cognitive psychologists, mathematicians, and logicians, amongst others. (Ellis, 2004)

The utilization of new technologies in language teaching and learning, generally known as computer-assisted language learning (CALL), is a relatively new phenomenon in the Nigerian environment. Despite its newness, CALL has attracted the attention of ESL teachers and they have expressed positive attitudes towards integrating new technologies into their teaching practices (Fatemi Jahromi & Salimi, 2013; Zare-Ee, 2011). Computer assisted language learning (CALL) is a form of

computer-based learning which carries two important features: bidirectional learning and individualized learning. Al-Jarf (2007) defines CALL as an approach to language teaching and learning in which computer technology is used as an aid to the presentation, reinforcement, and assessment of the material to be learned, usually including a substantial interactive element. Levy and Stockwell (2006) define CALL as the search for and study of applications of the computer in language teaching and learning. It is a student-centred learning material, which promotes self-paced learning. CALL has also been known by several other terms such as technology-enhanced language learning (TELL), computer-assisted language instruction (CALI), computer-aided language learning and mobile-assisted language learning (MALL) (Okebukola, 1997).

In the Nigerian context, it is noticed that the use of computer technology language teaching has been embraced by the private sectors, and it appears that the public sectors are still lagging in this regard (this I discovered as I have worked in both sectors). Since language instructors are using computers more frequently in teaching, it is necessary to examine the impact of Computer-Assisted Language Learning (CALL) on the teaching and learning of English in Nigeria where the language is native. Moreover, in Nigeria, employability of graduates has been linked to the belief that graduates have attained reasonable English language proficiency to enable them to communicate in the English language (Egwuogu, 2004). Thus, the chances of getting good jobs, given the ideal situation, are largely dependent on proficiency in communication skills. Attaining proficiency in communication on the other hand, to some extent, is determined by the kind of exposure language learners have to the rudiments of the language. Studies in the developed world have demonstrated that learning by means of technology, and particularly, by using CALL/MALL improves proficiency (Nunan, 2009). Against this background therefore, this study undertakes an

examination of the impact of CALL/MALL on enhancing second language learning in Nigerian schools, in relation to its effect on students' communication skill.

1.2 Statement of the Research problem

There has been a lot of hue and cry over the poor performance of pupils in the English language in Nigeria. Popular opinions attest to this fact (Baldah, 1999). Although some studies have been conducted in specific areas of English to unravel the causes of the problem and also to proffer solutions. Not much to the knowledge of these researchers focused on the impact of computer-aided language learning and mobile-assisted language learning (CALL/MALL) on the teaching and learning of English as a second language in Nigerian schools. Neither did they focus on how these technologies can help enhance better learners' communication skills.

Language teachers and researchers conduct empirical research "to determine what they can and should do to facilitate language learning" (Nunan & Bailey, 2009, p. 5). Teachers attempt to understand the learning process that learners go through in learning English language by conducting classroom investigations to find answers to questions of pedagogy (Nunan & Bailey, 2009). Many of these studies have shown that though learning the English language is a complex process for both learners (as the knowledge receivers) and the language teachers (as the knowledge providers), various language teaching and learning have been resolved through the use of CALL/MALL. Again, language teachers are continuously attempting various approaches in their teaching to address the different characteristics of their learners when teaching English language. Similarly, learners attempt to construct understanding within a social and cultural context (Greenfield, 2009), construct new knowledge on the basis of their current linguistic knowledge (Bransford, Brown, & Cocking, 2000; Vygotsky, 1978), and

develop their meta-cognitive skills in order to regulate their own learning (Bruner, 1985; Rogoff, 2003; Vygotsky, 1978). Some learners are able to overcome the difficulties and develop an ability to use the L2 quite effectively, though not usually sounding like a native speaker (Yule, 2014).

Hence, despite the reception enjoyed by CALL in some private schools in Nigeria, there has not been serious scholarship regarding its impact on language teaching and learning in the country. Therefore, this study undertakes this research to fill this void. The dichotomy between the private and public schools in Nigeria is worrisome. The latter, which have not embraced technologies like CALL may not see the reason to do so except they are confronted with the reality of what they stand to gain by joining in the train, and consequently when they see what have been losing by not utilising CALL in the teaching and learning of English as a second language in Nigeria.

Also, it is noticed that some teachers (Language teachers inclusive) cannot really differentiate between the computer as a tool that can aid second language learning, and the computer as a technological tool to aid learning. Learning in this context is generalized to using computer and mobile devices as instructional materials or as tools to source for materials to aid learning. Whereas the computer and other mobile devices also serve as tools that can aid second language teaching and learning; which some Nigerian schoolteachers and students are not so aware of. This paper is based on the need to carry out research on teacher-student awareness of Computer Assisted Language Learning (CALL) and Mobile Assisted Language Learning (MALL) and the impact it has/will have on Second Language Acquisition in Nigerian Schools.

1.3 Aim and Objectives of the Study

The overall aim of the study is to assess the impact of CALL/MALL on second language learning in Nigerian schools, in relation to its effects on students' communication skills. The study's objectives are to:

- i. Determine the level of awareness in CALL/MALL among Nigerian schoolteachers and learners.
- ii. Examine the difference between the performance and achievement of learners exposed to CALL/MALL and those that are not.
- iii. Examine the extent to which CALL/MALL instruction helps students fix their language and communication errors.

1.4 Research Questions

This research will be guided by the following questions:

- i. What is the awareness level of CALL/MALL among Nigerian schoolteachers and learners?
- ii. What is the performance of learners exposed to CALL/MALL and those that are not?
- iii. To what extent does CALL/MALL instruction help students fix their language and communication errors?

1.5 Scope of the Study

In the interdisciplinary field of Instructional Technology (IT) and Second Language Acquisition (SLA), numerous studies have been conducted to examine two issues. One is to ascertain whether traditional classroom teacher-directed instruction in conjunction with the use of computers lead to better learning outcomes than classroom instruction alone. The other borders on whether there are any differences in outcomes for students who are taught only by classroom instruction versus those who are taught solely by Computer-Assisted Language Learning (CALL). As averred by Chein (2004), the former issue discusses whether or not computers could serve as tools of reinforcement for classroom instruction, but even with the use of computers, it essentially claims that classroom instruction is still indispensable to second language learning.

The latter issue explores the differences in outcomes between students taught only by CALL instruction and those taught solely by traditional classroom instruction. In other words, it probes the question whether computers can supplant rather than supplement classroom instruction for second language acquisition. The focus of the current study relates to the latter issue. Moreover, its scope covers the availability and use of CALL/MALL devices, the patterns, and purpose(s) of their use, the perceived or observed benefits and the challenges of using CALL/MALL.

1.6 Significance of study

The study aims to investigate the impact of CALL/MALL on language learning, with focus on English as a second language in Nigeria as lack of proficiency in communication is a barrier to language learning. Usually, learners who have a low

proficiency level are less active during the process of language learning. In order to be competent in the English language, learners need learning aids as much as they can access, to create a sense of confidence in using the target language. For this reason, this study attempts to examine how learning of the English language can be more learner-centred by introducing to the learners the use of CALL/MALL devices to suit their different needs. This study provides some practical insights on the use of CALL/MALL in an English interaction course in the Nigerian educational context. ESL learners will find the study relevant as it provides them with the opportunity to learn and utilise the language more proficiently beyond the classroom.

Furthermore, this research on CALL/MALL in ESL learning context like Nigeria aims to add to the existing learning approach since mobile phones, one of the most commonly used CALL/MALL devices, are affordable; they are increasingly and frequently used by Nigerian learners of English.

1.7 Methodology

Following an exploratory mixed method design, this will randomly select 10 secondary schools in Ondo State, southwestern Nigeria. The choice of this state study was preferred because I am familiar with the environment in Nigeria, and I believe that such familiarity will enhance effective interaction with the study participants. In each school, 2 English Language teachers and 20 students will be selected. While I engaged the teachers in Focus Group Discussions (FGD) to elicit data on their perception and use of CALL/MALL in their classroom instructions, the students were evaluated using a questionnaire as a research tool. Each consists of 20 students from 5 secondary schools; whose first language is Yoruba, the language of the environment selected for the study.

The teachers will be the same for the control and experimental groups. The experimental group classes will be taught using mobile and other computer-assisted technologies (such as smartphone, wikis, blogs, and the like) while the control group classes are taught using the traditional methods. The students are subjected to language tests (using a questionnaire) after the teaching, and their performance is assessed. The qualitative and quantitative methods of analysis are deployed to interpret data obtained from the field work.

CHAPTER TWO

THEORETICAL FRAMEWORK AND REVIEW OF RELATED LITERATURE

2.0 Introduction

This chapter discusses Interactionist Theory, which is the theoretical pivot for this study. Also, it discusses themes related to the study, through the lens of existing studies.

2.1 Theoretical Framework: Interactionist Theory

This study explores interactionist theory to explain why the research questions were being asked in this study. According to interactionist approaches to SLA (Hatch, 1978; Long, 1996), *interaction* is the most important way in which learners obtain data for language learning. In Long's (1996) Interactionist Hypothesis theory, he claimed that interactive tasks that promote negotiation of meaning among learners can facilitate the development of a second language. Negotiation is often a product of interactional exchanges where communication breakdowns take place. Normally, the learner receives interactionally modified input, and she or he is also pushed to produce interactionally modified output (Swain, 1985). Interactionist theory focuses on the *interaction* component of the computational model: input, *interaction*, output. Based on the interactionist theory discussed above, the conventional classroom instruction seems to be able to provide more mediation for learning because mediated learning occurs through social interaction.

According to Ellis (2008), a primary means of mediation is verbal interaction. He stated that L2 acquisition is not a purely individual-based process but is one shared between the individual and other people.

Mackey and Gass (2006) indicated that interactionists claim, in addition to manipulation of input through interaction, learners need *opportunities to receive corrective feedback* to be able to better regulate language production or output. There are a number of studies in the Second Language Acquisition literature that are based on the interactionist perspectives. Hsu (1994) interpreted learners' requests for help as a way for learners to overcome the breakdowns in understanding what they experienced when interacting with an aural passage. Also, Liou (1997) used the interactionist account because from her viewpoint, the design of the courseware reflected the interaction negotiation model proposed by Long (1991). As Long (1991) indicated, one of the key components of the interactionist theory is that only the input that is noticed or perceived can become beneficial. It provides guidance for the design of instructional materials, which should contain features that enhance input through modifications.

Ellis' (1999) work on interaction, Chapelle (2003) identified three types of basic interaction: interpersonal (between people), intrapersonal (within a person's mind), and that which occurs between a person and a computer (learner-computer). Chapelle noted that most users are accustomed to initiate learner-computer interaction when they click on a hypertext link to receive help with comprehension or seek dictionary help. One benefit of learner-computer interaction identified by Chapelle was that of obtaining enhanced input. Chapelle (2003) noted that SLA researchers agree that enrichment of input is more beneficial for learning than simplification because learners are exposed to forms closer to the ones used by native speakers of the language.

Drawing on interactionist SLA theory and Computer-Assisted Language Learning (CALL) research, Chapelle (1999) suggested that interactions in CALL may be beneficial for language development if they focus learners' attention on input form, allow for modification so learners can focus on input form and meaning, and draw learners' attention to the form of their linguistic output in a way that leads to self-correction (Mills, 2000).

In relation to the current study, a Computer-Assisted Language Learning (CALL) software may be able to aid learners as an expert, just like what a classroom teacher can do; nevertheless, the researcher intended to investigate if the *interactive* CALL software can provide the essential social interaction that is crucial for learning as a regular classroom instruction is capable of providing to students. As the interactionist theory suggests, the purpose of *interaction* is to engage students in learning and to provide immediate feedback and opportunities for changes and corrections, which is also an important type of interaction that is essential to the second language acquisition process. Therefore, each individual student using the CALL software would have equal opportunity to interact with the program and receive instant feedback from it.

2.2 Literature Review

2.2.1 Computer-mediated communication (CMC)

Computer Mediated Communication (CMC) is defined as "the method of creating, exchanging and perceiving the information, which aids encode, decode and transmit the messages by means of telecommunication network" (December 1996). It includes "any human interaction, which are symbolic text-based, directed or facilitated over digitally-based technologies. It involves, Internet; email, instant messaging, cellular phone text, multi-user interaction etc. In this definition, certain message

interchange is computerized at a certain point in the medium of exchange when people are involved in the process. Some communications are not considered as CMC, like hearing aids, megaphones or dedicated analogue teletype systems and also electronically enhanced or enabled systems. In addition, computers are not usually included by various media since digital technologies are involved by a lot of media.

Recently, communications scholars have begun to recognize that what is missing in computer mediated communications {CMC} can actually be an advantage for communicators who want to manage the impressions they make. People find it very interesting that the Internet allows them to present themselves in a variety of ways and different views.

Computer-mediated communication (CMC) is defined as any communicative transaction that occurs through the use of two or more networked computers. While the term has habitually referred to those communications that occur via computer-mediated formats (e.g., instant messages, e-mails, chat rooms), it has also been applied to other forms of text-based interaction such as text messaging. Thurlow et al (2004) research on CMC focuses largely on the social effects of different computer-supported communication technologies. Communication occurring within a computer-mediated format has an effect on many different aspects of an interaction. These have received attention in scholarly literature, which includes impression formation, group dynamics, and especially relationship formation.

Romiszowski & Mason (1996) “pragmatically” defined computer mediated communication as “the process by which people create, exchange, and perceive information using networked telecommunications systems that facilitate encoding, transmitting, and decoding messages”. Naughton, (2000) also provides for great flexibility in approaches to researching CMC, as “studies of CMC can view this process

from a variety of interdisciplinary theoretical perspectives by focusing on some combination of people, technology, processes, or effects”. Although Computer Mediated Communication (CMC) is not a novelty, its current spread is casting a blaze of light on the new environments created by electronic communications.

In 2002, Hay Thornthwaite & Wellman carried out a study on the forms of CMC. Their report posits that CMC can be divided into synchronous and asynchronous modes. In synchronous communications all participants are online at the same time (e.g. IRC), while asynchronous communications occur with time constraints. (e.g. email). People choose asynchronous communication like email for delayed, controlled, and longer messages. They also use it because they can multitask while talking. Herring (1999) states CMC can be divided into categories of how many people are communicating, how many people are they communicating with, and how they are communicating. Some examples are one-to-one communication, one-to-many communication, many-to-many communication, monologues, dialogues, and multilogues.

Literature on the use of Computer-Mediated Communication (CMC) for foreign language teaching purposes mainly reflects research in the areas of foreign language learning anxiety and participation, transfer of skills from text-based CMC to oral language skills, the effects of synchronous and asynchronous communication, amount of target language produced, native speaker (NS)-non-native speaker (NNS) interactions and some research emerging on the use of voice communication. One of the obstacles encountered in improvement of oral skills, for instance, is the foreign language anxiety resulting from the students’ concern about making mistakes particularly in front of their friends. Language anxiety results in a dominance of the teacher and confident students during discussions. Thus, even if sufficient time is

allocated to oral student interaction, shy and highly anxious students cannot benefit from the opportunities arising from the context. At this very point, computer-mediated communication (CMC) emerges as a feasible solution particularly for improvement of speaking skills and decreasing the level of foreign language anxiety by raising self-confidence of the students within the scope of both formal and distance education. Many studies indicate that CMC can lower foreign language learners' anxiety levels (Perez, 2003; Warschauer, 1996; Roed, 2003). Studies investigating the effects of CMC on foreign language improvement also demonstrate that participation is more equal in written communication in these environments (Warschauer, 1996) and that the dominance of teachers and more confident students in discussions is decreased with greater participation of shy students in the text chat environment (Kern, 1995). According to Nguyen (2008), CMC has proved to be influential in promoting educational conditions and "is believed to offer a number of pedagogical applications.

2.2.2 The Use of Multimedia in Language Education

Multimedia teaching method has been used in English teaching, and it has contributed a lot to teaching quality. I will say the Chalk and Talk teaching method is not enough to teach English effectively. Thus, efforts are being channelled towards utilising modern education technology reasonably to fulfil the target of college English teaching. Multimedia is the combination of different content forms. It includes a combination of text, audio, still images, animation, video, or interactivity content forms. It is usually recorded and played, displayed, or accessed by information content processing devices, such as computerized and electronic devices, but can also be part of a live performance. Multimedia devices are electronic media devices used to store and experience multimedia content. Multimedia provides a complex multi-sensory experience in exploring our world through the presentation of information through text,

graphics, images, audio and video, and there is evidence to suggest that a mixture of words and pictures increases the likelihood that people can integrate a large amount of information.

Many researchers have called for and emphasized the importance of the inclusion of technology in teacher education (Volk, 2000; Gentile, Lonberger, Parana, & West, 2000; Chester, 2001; Schnackenberg, Luik, Nisan, & Servant, 2001; & Berlin & White, 2002). Educational research investigating the utility of technology for learning and teaching has been continuous for several decades. One form of this integration is with the use of multimedia. The educational benefits of multimedia are well documented (Moore, 2000). Multimedia has been used with student teachers to improve their training and hence the quality of education (Almekhlafi, 2004). However, multimedia research was not always consistent in its results. Some studies yielded positive effects while others did not (Soboleva & Tronenko 2002). In the field of language learning, multimedia has been investigated by many researchers. Results indicated a positive effect of multimedia on learning languages as cited by (Liou, 1995) and (Johnston & Milne, 1995). Teachers can use multimedia technology to create more colourful and stimulating language classes.

There are many techniques applicable in various forms to English language teaching situations that now threaten "to undermine the classroom completely as a place of study" (Motteram, 2013). Some are useful for testing and distance education; some for teaching business English, spoken English, reading, listening, or interpreting. The principle of teaching should be to appreciate new technologies without taking over the role of the teacher and without limiting the functions of traditional teaching methods. More advantages of the use of multimedia in language education have been documented by Pun (2013). They include, it motivates students to learn English,

develops students' communicative competence, improves teaching efficiency, enhances interaction among students and between teachers and students, creates a conducive teaching environment in the classrooms and provides opportunities for English teaching outside the classrooms.

The foregoing indicates that there are various reasons why all language teachers and learners must know how to make use of the new technology. Most importantly, the new technologies have been discovered and disseminated so quickly that we cannot avoid their attraction and influence on all of us: both teachers and learners, even both native and non-native speakers of English. As multimedia technology becomes more readily available to all of us, it seems appropriate that the language teachers should integrate it into their lesson and assessment planning in the same way they have been doing with video. In this way, the teachers of English can take full advantage of technology to teach English in the non-native speaking countries.

2.2.3 The Evolution of CALL

The origins of computer assisted learning (CAL) and computer assisted language learning (CALL) can be traced back to the 1950s when large, unmovable mainframe computers were used as technological instructional tools. Even in this era of low technology, the developments in computers were quite rapid. According to (Beatty, 2003), the tendency to make use of newly introduced technologies in language teaching and learning continued and increased with the emergence of microcomputers, videodiscs, CD/DVDs, hypertext, hypermedia, and interactive multimedia applications.

Warschauer (2000) divided the history of CALL into three phases: i) structural (1970s to 1980s), during which tutorials were developed for use on mainframe computers to provide learners with drill-based grammar practice for the purpose of accuracy; ii) communicative (1980s to 1990s), during which personal computers were used for communicative exercises for the purpose of accuracy and fluency; and iii) integrative (21st Century), during which multimedia and the Internet have been used to expose learners to authentic language for the purpose of accuracy, fluency, and agency.

Since the beginning of the 1990s, more innovations in computer technology have been witnessed than ever. The evolution of internet technology and www (World Wide Web) sources changed the lives of both ordinary people and those interested in language teaching and learning. Computerized learning was no longer limited to computer programs accessible only on the computers at a university or in a computer laboratory. On the contrary, “www” has enabled people to access vast amounts of information from various sources wherever and whenever they have the opportunity to connect to the Internet (Levy, 1997). This easy access to sources of information on the Internet also inspired educators. Since then, there have been lots of language teaching websites, online sources and materials for language learning, online publications of books, and many other multimedia applications that have proved to be useful language learning tools.

Nowadays, it can be observed that CALL applications are used on many occasions, for various purposes. For instance, many teachers present information using the Internet and technological tools like LCD projectors or screens in the classroom. They frequently ask their students to email their assignments or submit them online. There are many interactive language learning games with colourful and motivating interfaces available to young learners. Almost all English language teaching textbooks

are accompanied by audio cassettes or video CDs, interactive DVDs or software, and online subscriptions to specially designed language learning websites. Technology use in language learning has progressed considerably since its humble beginnings, but it is still far from full integration.

2.2.4 General Overview of Prospects of CALL

Various available studies on the use of CALL have documented a wide range of opportunities offered by the technology. Briefly, this section presents an overview of some of the affordances of technology for language education. It enables multimodal language activities in which reading, writing, speaking, and listening skills are integrated, not isolated, thereby accommodating the strengths of different learners (Blake, 2016; Felix, 2008). Also, it reduces language learning anxiety (Hong et al., 2016), and increases motivation and participation (Felix, 2008; Kessler, 2018). Apart from enabling learners to collaborate, co-construct knowledge, and build communities (Kessler, 2018; Reinders & White, 2016), CALL also allows learners to construct a new social identity online which may give them confidence to interact with native speakers. Through this, they also find a medium between their first language and the target language (Blake, 2016; Garrett, 2009).

CALL facilitates individualized learning experiences for learner-centred instruction (Kessler, 2018), in which learner analytics is expected to play an increasing role as the ability to monitor and track students' progress increases (Adams Becker, Rodriguez, Estrada, & Davis, 2016), for instance, with adaptive learning tools like the online language learning platform. CALL also enables not only access to big data such as corpora (large collections of authentic language) that can be used by teachers to create authentic learning activities (Godwin-Jones, 2017) but also immersion in authentic contexts via the use of immersive technologies such as virtual reality (VR),

online games, and telepresence or video conferencing tools (Becker et al., 2016; Blyth, 2018). In addition to these are that CALL helps to develop learners' autonomy and allows informal learning experiences that empower learners (Adams Becker et al., 2016; Godwin-Jones, 2017b; Jones et al., 2017).

Furthermore, it allows learners to explore and engage in meaningful, authentic language practice with native speakers via computer-mediated communication (CMC) tools (Blake, 2016; Garrett, 2009), such as texting, chats, e-mail, online discussions, blogging, wikis, and web-based word processing, for instance., Google Docs (Kessler, 2018). CALL also enables computer-adaptive testing, which improves test security and prevents cheating (Chapelle & Voss, 2016), and allows for real-time feedback on assessments (Chapelle & Voss, 2016).

Likewise, the technology enables automated feedback on written tasks via automated writing evaluation and chatbots, which can be created by teachers for text chat practice.; also enables spoken feedback via automated speech recognition (ASR) (Golonka et al., 2014; Kessler, 2018). Lastly, CALL facilitates one-on-one language advising/language support between teachers and students via online access (Reinders & White, 2016).

In broader perspectives, a number of other studies have investigated the effect of Web-based instruction, as part of CALL, and these studies have shown that Web-based instruction may have multiple dimensions of use in education. For instance, Gale (1991) reported that; learners are more eager and motivated in Web-based instruction. Khan (1997) refers to eight frameworks for meaningful learning in Web-based learning; Pedagogical, Technological, Interface design, Evaluation, Management, Resource Support, Ethical, and Institutional. Later, Kahn (2001) proposed a framework

for using Web-based instruction ranging from ‘macro’ to ‘micro’ uses. All these have one feature in common: Internet or World Wide Web.

Web-based learning continues to attract the attention of researchers (Dlaska, 2002; Lin & Hsu, 2001; Liou, 2001; Liou & Yang, 2002; Sun, 2003). Theoretically, Web-based instruction is a suitable environment for learning language. It allows teachers to practice with their students individually or in small groups. Many studies have been conducted to investigate the effect of Web-based instruction on language learning. As an example, Stepp-Greany (2002) examined students’ perceptions of using multimedia for language instruction. She found that most of the students agreed that instruction was facilitated in the multimedia environment. According to Chaudron (2001), a historical review of technology in language learning and teaching offers more insight into the role that computers have had in the language learning classroom.

In a study conducted by Fletcher and Atkinson (1972), the participants of the experimental group received computer assisted language instruction 8-10 minutes a day for five months; the rest of the day was the same for all students. The findings showed that the students who received computer-assisted instruction performed better than those who did not.

Further, Getkham (2004) examined the vocabulary performance of students in two groups: one used conventional texts and the other used multimedia computer programs. By comparing the results of immediate and delayed post-tests, the researcher found that the degree of forgetting of vocabulary in the multimedia group was less than the group in which texts were printed. The researcher also concluded that multimedia computer programs can help learners retain vocabulary.

In another study, Al-Jarf (2004) investigated the effects of Web-based learning and conventional learning on EFL learners’ writing. He found that using Web-based

instruction as a supplement in conventional classes has significant effects on writing structure. The study also examined the effects of instructional technology and distance learning.

2.2.5 Challenges of CALL in Second Language Acquisition Context

Second Language Acquisition (SLA) theory has always played a tremendous role in the development and use of CALL, but this is perhaps the greatest hindrance to the use of technology in the teaching of languages other than English, particularly less commonly taught languages. Because SLA theory originated in the field of English as a Second Language (ESL), it applies to some extent to commonly taught languages like Spanish and French that are closely related to English, but it does not apply to languages that are very different, especially those with a non-Roman script (Garrett, 2009; Godwin Jones, 2013).

According to Sauro (2016), English was identified as the focus of 64% of the studies. In her commentary, Sauro, a teacher and CALL practitioner in a teacher education program in Sweden, referred to a 2015 influx of about 163,000 refugees, over 35,000 of whom were unaccompanied minors, and all of whom needed to learn Swedish. Much existing CALL research did not apply to teaching Swedish; as a result, the pre-service teachers with whom she worked were not convinced of the relevancy of the literature to their context. Sauro and her pre-service teachers were further disappointed to find that although Swedish was one of the languages featured on the popular, free language learning platform like Duolingo, LingQ, Babbel, etc, thereby making it accessible for anyone who did not know or wish to learn English language. An overwhelming focus in CALL literature on technology use for the purpose of English language instruction has been viewed by others as a prevailing issue (Garrett, 2009; Golonka et al., 2014).

Some other additional challenges with technology use in language education have been pointed out by Kern (2006) and Godwin-Jones (2016). Kern (2006) found this somewhat problematic in that “CMC language is often less correct, less complex, less coherent than other forms of language use” (p. 194) and that learners might lack the ability to distinguish between standard and non-standard uses of language; thus, he advised teaching students appropriate registers (levels of formal and informal language) for different communicative contexts. Godwin-Jones (2016) also observed that exposure to different types of online genres provides opportunities for learners to become acquainted with informal language not typically found in textbooks. Chapelle and Jamieson (2008) offered similar advice. Blyth (2018) further suggested that the dynamic nature of speaker identity in online cultural interaction requires teachers to help learners make sense of such language exchanges. In this regard, Haugh (2017) cautioned against learner reliance on translation tools that might miss cultural nuances.

Moreover, as learning becomes more personalized, teachers in all disciplines are increasingly required to take on new roles such as facilitating and guiding (Reinders & White, 2016). Godwin-Jones (2015) suggested that tasks might be facilitated by a basic working knowledge of the design and coding of certain digital tools (Godwin-Jones, 2015). Another challenge documented by Brick and Cervi-Wilson, (2015) is that to reasonably assess the use of the technologies they wish to incorporate into their teaching, teachers need to acquire practical knowledge of such tools. Also, they should be prepared to train learners, even the most tech-savvy ones, to use various tools effectively, to reduce anxiety and cognitive load, and enable achievement of language learning goals. This is critical for learners of less commonly taught languages, who should be provided with resources and training early in their language learning experience (Garrett, 2009; Godwin-Jones, 2013).

2.2.6 CALL / MALL Research

CALL research has been ongoing for decades investigating CALL use in different contexts and with different languages worldwide. Its potential for learning and teaching in the field of foreign languages has been discussed and documented by many researchers (Crosby, 1997; Peterson, 1998; Charischak, 2000; Vrtacnik et al., 2000; Ayres, 2002, etc).

Charischak (2000) stated that for a long time, basic drill and practice software programs dominated the market in CALL. Supporting this claim, Robert (2002) pointed out that the use of computers to assist learners in their language studies has increased phenomenally over the past decade. Cushion and Dominique (2002) described how recent technological developments have provided the possibility of overcoming technical problems in conjunction with the Java programming language and the Unicode character numbering system. Schwienhorst (2002) discussed CALL and focused on the benefits of virtual reality environments, particularly for foreign language contexts.

For many years, foreign language teachers have used the computer to provide supplemental exercises. Recently, due to technological advancement, teachers started to consider the use of computers as an essential part of daily foreign language teaching and learning. Technology has the potential to play a major role in foreign language teaching and learning. A lot of attention has been paid to the use of CALL in foreign languages teaching and learning. In other words, CALL gained considerable attention from different entities including researchers and writers. Peterson (1998) stated that CALL has developed from small beginnings into a major element in many university languages programs in Japan.

The number of individual educators incorporating CALL materials into their classes has increased markedly. This increase of interest in CALL, and educational technology in general, has also been manifested in the increase in the number of CALL facilities created within universities and schools. Some writers devoted whole books to the discussion of CALL. For example, Kulik and Kulik (1991) stated that a meta-analysis of findings from 254 controlled evaluation studies showed that computer-based instruction (CBI) usually produces positive effects on learners. The studies covered learners of all age levels from kindergarten pupils to adult learners.

In the year 1997, The Computer Assisted Language Learning Journal devoted a special issue, "The virtual learning environment," reviewed by Crosby (1997) for CALL environment and effect on learning and teaching. Following the same path, Levy (1997) wrote *Computer Assisted Language Learning: Context and Conceptualization*, a discussion of CALL including a historical review of CALL projects from the 1960s to the 1990s.

Conrad (1996) noted that there had been a meagre output of CALL effectiveness research published by the recognized second language acquisition journals, and that the 19 empirical studies he did uncover represent almost as many different specific areas of CALL applications. Research conducted in this area has documented many positive effects on learners' achievement and learning. Recently, Jung (2002) presented a bibliography on CALL, mostly citing post-1997 journal articles and book publications.

In a similar vein, Bayraktar (2002) conducted a meta-analysis of the effectiveness of computer assisted instruction (CAI) on student achievement in secondary and college science education compared to traditional instruction. Results showed a small positive effect for CAI use when used in simulation or tutorial models, with individual computer use, and when used as a supplement to traditional instruction.

Attitudes towards CALL and other types of technology have been investigated. In most cases, positive attitudes towards CALL were documented. For example, Escalada & Zollman (1997) demonstrated in their study, the effects on student learning and attitudes of using interactive digital video in the physics classroom, showing that interactive video materials were appropriate for the activity-based environment used in the course on concepts of physics. Klassen and Milton (1999) evaluated the effectiveness of a multimedia based English language learning program at a Hong Kong university. Results demonstrated positive attitudinal changes for the multimedia enhanced mode of learning. Similarly, Vrtacnik et al. (2000) stated that most of the studies reported about higher achievements and better attitudes towards science and computers when computer-based approaches were introduced in the classroom.

More recently, Ayres (2002) examined learners' attitudes towards the use of CALL and reported that the subject's attitudes towards English Learning increased significantly. The study also revealed that there was a link between learners' attitudes and their level of computer literacy, language level and age. Holmes (1998) surveyed 100 Japanese first year learners investigated the influence of CALL in their language classroom and on language education in Japan in general. Similarly, Robert (2002) examined student attitudes towards the use of CALL, and their perceived view of its relevance to their course of study. Vrtacnik et al. (2000) examined the effects of interactive multimedia tutorial teaching units on learners' perception and understanding of chemical concepts in the Netherlands.

Similarly, Noriko (2002) developed a language tutor program to develop learners' grammatical and sentence production skills in Japanese language. The study revealed that learners' achievement improved tremendously. To measure their attitude

towards the program, the researcher designed a questionnaire. The results indicated an enthusiastic student response.

Likewise, Chikamatsu (2003) pointed out that CALL gains popularity and is becoming standard in foreign language classrooms. The researcher examined the effects of computers on writing efficiency and quality among intermediate learners of Japanese. One of the findings was that accuracy rates and the number of kanji characters used were significantly different, indicating that learners benefited from computer writing.

From previous research, it can be concluded that the use of CALL is very beneficial for language learning and learners' attitudes toward CALL was positive, particularly if CALL applications were well-designed and used. For example, CALL effectiveness and learners' positive attitudes toward it was documented in many research studies (Conrad, 1996; Vrtacnik et al.; 2000, Ayres, 2002; Bayraktar, 2002; Jung, 2002; Noriko, 2002; Robert, 2002).

2.2.7 Current Status of CALL

According to Warschauer (1996, 2000, and 2004), the three phases of CALL do not fall into a linear timeline. As each new phase emerges, the previous phases too continue to coexist. The commencement of a new phase “does not necessarily entail rejecting the programs and methods of a previous phase; rather the old is subsumed within the new. In addition, the phases do not gain prominence in one fell swoop, but like all innovations, gain acceptance slowly and unevenly” (Warschauer, 1996). The following summarises the three phases of CALL based on Warschauer's typology (Warschauer, 1996; Warschauer, 2000, p.64; Warschauer, 2004, p.11; Taylor and Gitsaki, 2004, p.134). Over the past few decades, CALL has transformed “from being a niche field practised by a few early adopters, to being mainstream” (Motteram, 2013c, p.6). The main drive behind this transformation is that many digital technologies have

moved to the centre of daily life in many parts of the world. Their speedy adoption has expanded the means by which one connects to and communicates with the others. They have changed the sources from which people gather information. They also play important roles in many facets of life: education, work, recreation, etc. Thus, these digital technologies have become “normalised” to the extent that they are invisible, hardly even recognised as a technology, taken for granted in everyday life” (Bax 2003, 23).

As a result, CALL has moved from the peripheral interest of the language teaching community to mainstream thinking, education, and practice. Due to the diversity of digital technologies, CALL has evolved to represent a set of various divisions such as Computer Mediated Communication, Blended Learning, Virtual Worlds, Gamification, etc. Further, the field has many sub-divisions such as CALL for ESP (English for Specific Purposes), CALL for EAP (English for Academic Purposes), CALL for young learners, and so on. Thus, CALL is no longer a single, unified subject. CALL has remained predominantly a practice-oriented field. Here, practice informs research and development of new technologies. All CALL studies have shown “practitioners using their own networks, knowledge and resources rather than turning to classroom research for new ideas” (Stanley, 2013, p.54). The field had been the same even in the past. Many researchers have confirmed this notion. In 1977, Kemmis et al. stated, “CALL is practitioner-led as opposed to research-based” (Kemmis, Atkin and Wright, 1977, p.6). In 1977, Levy too shared a similar view: “many developers rely on their intuition as teachers rather than research on learning” (Levy, 1997, p.4).

CALL is an established and recognised but also quickly evolving academic field (EuroCALL, 2010; Motteram, 2013c, p.5). Zhang and Barber in 2008 asserted that CALL is “maturing and heading toward a better balance between technology and

thinking” (Zhang and Barber, 2008, p.xviii). They also acknowledge that technology is developing faster than our thinking processes which, in turn, is driving forward. In such a race, CALL practitioners and researchers have learnt “to recognize and deal more effectively with the dissonance between the speed of technological development and the speed of our thinking” (Zhang and Barber, 2008, p.xviii). As a result, today more and more technologies have been integrated into classrooms “physically and pedagogically rather than being an add on” (Kern, 2013, p.92). More importantly, the computer is now seen and used as a tool to accomplish certain tasks or to communicate. Numerous teachers’ associations across the world are aspiring to keep up with the pace of technological developments.

There have emerged as technology-specialised professional associations. Wikipedia lists as many as twelve such associations: APACALL, AsiaCALL, AULC, CALICO, EUROCALL, IALLT, IATEFL, JALTCALL, India CALL, LET, Pac CALL, and WorldCALL (Wikipedia contributors, 2014). There are also a number of journals exclusively dedicated to the field of technology and language learning: *CALICO*, *CALL*, *International Journal of Computer Assisted Language Learning and Teaching*, *Language Learning and Technology*, *ReCALL* and *Journal of Technology for ELT*. Journals that have a more general focus on education also include articles about CALL. Recently, there has been a growth of articles in journals that address very specific domains of CALL, such as CALL for young learners (Macaro, Handley and Walter, 2012), social media in language learning, digital games, mobile learning, virtual worlds, and so on.

All these factors makes it clear that “we are now at a time in human development where digital technology is making an increasingly significant contribution to language learning in many parts of the world” (Motteram, 2013b,

p.177). Therefore, CALL can now be defined as “the full integration of technology into language learning with its three elements of theory, pedagogy, and technology playing an equally important role” (Garrett, 2009, p.730; Quoted in Kern, 2013, p.92).

2.2.8 Use of Technology by Language Teachers in Nigerian Schools

Educational technology is one of the latest innovations that have been adopted in Nigeria in a bid to improve the quality of learning. Educational technology identifies and solves educational problems and could employ any desirable way to achieve its set objectives. The Federal Government of Nigeria in pursuit of these objectives, in the National Policy on Education (Federal Republic of Nigeria, 2004), recognizes the prominent role of ICTs in the modern world, and has integrated ICTs into education in Nigeria. To actualize this goal, the document states that the government will provide basic infrastructure and training at the primary school. At the junior secondary school, computer education has been made a pre-vocational elective, and is a vocational elective at the senior secondary school.

In this regard, the Nigerian government made the first attempt in 2004 to introduce computer education in schools. Unfortunately, the project did not actualize beyond the sheer distribution and installation of personal computers (Okebukola, 1997). Okebukola further adds that the computer is not part of classroom technology in more than 90 percent of the public schools in Nigeria. The implication is that the chalkboard and textbook continue to dominate classroom scenarios in the generality of secondary schools in Nigeria. Moreover, making computer education a pre-vocational or vocational elective in schools is not synonymous with effective use of ICT in Nigerian schools. As pointed out by Ajayi and Ekundayo (2019), some of the facilities needed for integration and optimum utilisation of computer technology in schools are

not sufficiently provided for teaching – learning process in the secondary schools. This might account for why teachers are not making use of them in their teaching. Also, it must be stressed that the effective use of the various methods of the ICT in teaching learning depends on the availability of these facilities and teachers' competence in using them.

A number of studies have reported that quite a number of teachers in Nigerian schools lack required competence in ICT, including language teachers. This definitely would continue to hamper the use of CALL in Nigerian schools. This study believes that by investigating the impact of computer technology like CALL/MALL on the teaching and learning of English as a second language, the level of stakeholder's, particularly teachers and learner's awareness and consequently motivation into CALL/MALL will be increased. This is considered so following Wach's (2015) assertion that CALL teacher training/education has been identified as a major tool for encouraging and boosting technology use among language teachers.

2.2.9 The Use of CALL for the Four Skills

A number of studies have been done concerning how the use of CALL affects the development of language learners' four skills (listening, speaking, reading, and writing). Most report significant gains in reading and listening and most CALL programs are geared toward these receptive skills because of the current state of computer technology in linguistics. However, most reading and listening software is based on drills (Domingo, 2007). Gains in writing skills have not been as impressive as computers cannot assess this well (Stepp, 2002). However, using current CALL technology, even with its current limitations, for the development of speaking abilities, has gained much attention. There has been some success in using CALL, in particular

computer-mediated communication, to help speaking skills closely linked to “communicative competence” (ability to engage in meaningful conversation in the target language) and provide controlled interactive speaking practice outside the classroom (Ehsani, 2007).

Skills-oriented language teaching remains a common approach for classes as well as for self-learning, and computer-assisted language learning is no exception. In the 20th Anniversary Issue of *Language Learning & Technology* (June 2016), Robert Blake provides a valuable review of some key developments in the four skills for CALL, framing it under the umbrella of task-based language teaching. He notes that isolating each of the four-skills (listening, speaking, reading, and writing) in practice is no longer as relevant as it was historically, given contemporary views of integrated language development and multi-modal expression. However, some content and commentary from the Stanford University Linguistic Department argue that the four-skills are still relevant in this discussion on CALL and the overall need for incorporating technology in language teaching, regardless of whether they isolate or integrate those skills.

According to the commentary, listening is potentially one of the most promising areas for CALL development. This is because multimedia computing has everything standard audio and video have with the addition of a variety of meaning technologies such as text support, hyperlinked glossaries, and even translations. Listening activities typically involve presentations followed by comprehension questions--some also include full or partial dictations. One type of presentation specific to CALL is the *punctuated* presentation, in which the flow is interrupted at intervals to ask questions along the way. This in theory encourages more focused attention and allows a learner to get a check on understanding early in the activity.

In terms of *direct* practice of speaking, the commentary adds that recent developments on the web have allowed for voice chat sites which make it possible for learners and teachers to interact through the Internet in distance education courses. It adds that perhaps the most widely used indirect method for supporting speaking is simply to listen to conversational dialogues on disk or the web or through apps, using the dialogues as models for interactions in common situations. This aligns with Payne and Whitney (2002) who suggest that using text-based chat supports the development of speaking skills indirectly due to the synchronous and informal nature of chat. Another potential, but relatively undeveloped area mentioned in the commentary is the use of "chatbots" that incorporate keyword analysis to provide a simulated interaction. In relation to second language learning, Teixeira (2015) avers that L2 speaking can be assisted by technology in two modes, tutorial CALL and CMC. He adds that CALL programs that merely present electronic flashcards can be helpful if students also subvocalize when they are learning new words and phrases. Usually, these types of programs ask students to compare their own audio recordings with those of native speakers of diverse accents. However, Teixeira acknowledges that one obvious drawback of this type of exercise for improving L2 speech is the lack of any feedback

With regard to reading, the commentary indicated that in the early days of CALL, reading software was designed to improve skills in order to transfer them to paper materials. It added that more recently, reading in digital form is becoming more and more common, and that given the increasing popularity of electronic readers to link to an electronic dictionary, the tools used for reading are likely to become richer supports for language learning. Most CALL reading instruction, first on disk and later on the web, has involved the use of meaning technologies. These include dedicated applications, such as hypertext glossaries, translations, and notes (on grammar, usage, culture), put together by developers for particular texts and generic applications such

as electronic dictionaries, encyclopaedias, translation systems. The same commentary suggested some ways CALL can be used to support reading. They include just using the web (teachers give students tasks that require finding, comprehending, and sometimes consolidating information on the web); educational sites with ESL or adult literacy support; text reconstruction activities, (such as Storyboard, cloze exercises, and jigsaw readings); timed or paced readings to develop speed; multimedia reading (such as voice enhanced texts and dynamically illustrated material); and online graded readers.

The fourth skill, writing, has also been a common skill taught as a course through distance education using the Internet. Some of the ways computers may enhance writing instruction include use of email and discussion boards for fluency development; online writing resources; blank screen (where the monitor is turned off and students type in their ideas without being distracted) and other production techniques, such as using graphic organizers or concept mapping; collaborative writing tasks; writing support practice (for example, CALL activities with fill-ins for structured writing); and publication opportunities (both paper and web) as motivators.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the research procedure. Here, the details of the method of research used in collecting data for the project are provided, including the instrument used. It clearly defines the target population for the research, the data gathering instrument used for the research, the procedure for data collection and also the data analysis techniques.

3.1 Research Design

This research adopted survey design. This research is limited to students in secondary schools as they form the basis of the study. This study will therefore follow a descriptive design that is aimed at collecting samples of the population in order to examine the distribution incidence and interaction. I randomly selected 10 secondary schools in Ondo State, southwestern Nigeria. The choice of this state for this study was preferred by me because I am familiar with the environment in Nigeria, and I believe that such familiarity will enhance effective interaction with the study participants. In each school, 2 English Language teachers and 20 students will be selected. While I will engage the teachers in Focus Group Discussions (FGD) to elicit data on their awareness of the impact of CALL/MALL in language learning in Nigerian schools. For the students, data will be collected through the use of questionnaires.

3.2 Study Population and Sample Procedure

Using a random sampling technique, the study will randomly select 10 secondary schools in Ondo State, southwestern Nigeria. The choice of this state as area of study was preferred because the researcher is familiar with this environment in Nigeria and believes that such familiarity will enhance effective interaction with the study participants. In each school, 2 English Language teachers and 20 students will be selected. This will make a total of 100 students and 20 teachers. All the participants would be those whose first language is Yoruba, the language of the environment selected for the study.

3.3 Procedure for Data Collection Instrument and Techniques

The study adopted a questionnaire method to gather the data for the study; A structured questionnaire was designed, subjected to face and content validity, and then administered to the participants with the help of five research assistants. The questionnaire items sought the permission and willingness of the respondents to participate in the study. The participants responded to the questionnaire items, and the copies of the questionnaire were retrieved immediately. The students' responses to the questionnaire will constitute the data for the study.

The questionnaire on the research topic "The impact of Computer Assisted Language Learning (CALL) and Mobile Assisted Language Learning (MALL) on Second Language learning in Nigerian Schools" has three sections. The first section(A) collects information about the students while the second section(B) has a list of

itemized questions with options for the students and another section for the language teachers. The questions are made up of items relating to the research questions and how its implications are perceived by the students and the teachers.

3.4 Data Analysis Techniques

The quantitative method of analysis will be deployed to interpret data obtained from the field work.

This chapter discusses the method and the instrument used in data collection. The next chapter (chapter four) will focus on presentation and analysis of data.

All data collected from the study were properly analysed. Descriptive single and Chi-square statistics were used to analyse the data. The descriptive statistics was used to identify the impact of CALL/MALL in language learning while the chi-square statistics was used to carry out the frequencies using gender composition and location of schools as variables.

The statistical tools of frequency count, percentage score, and chi-square were all employed for the data analysis. This will give the study a strong empirical and statistical footing.

CHAPTER FOUR

4.0 INTRODUCTION

This chapter presents in detail the findings of the data collected. The percentage of the respondents to the questionnaire were analysed for the sole purpose of ascertaining the level of the utilization of computer – assisted language learning (CALL) and mobile – assisted language learning (MALL) in the acquisition of English language as a second language and its impacts.

4.1 PRESENTATION OF RESULTS

Out of the one hundred (100) copies of questionnaire administered, a total of one hundred (100) copies were retrieved from the respondents. The one hundred (100) questionnaires were administered to one hundred students from ten different schools.

Another set of fifty (50) questionnaires were administered to fifty (50) English language teachers in ten (10) different schools. This aspect of the teacher's questionnaire attempts to look into the level of the usage of CALL and MALL, the awareness of technology in teaching English language and its impact on the acquisition of English language.

The students' questionnaire is segmented into two different parts, the students 'computer / ICT experiences and activities related to schoolwork. The analysis will be explained through the table below:

4.2 DISCUSSION ON STUDENTS QUESTIONNAIRE

TABLE 1

S/N	COMPUTER/ICT EXPERIENCE	YES	NO
a.	Have you used a computer or any technology device (Laptops, note pads, iPad) Before?	95	5
b.	Have you ever heard or know that the computer can be used as a vital tool for language learning?	90	10
c.	I use the computer mostly for other things except language learning.	82	18
d.	Have you used the computer/internet outside school (at home, with a friend, internet café, public library etc.)?	86	14
e.	I can use the computer effectively without guidance from anyone.	76	24
f.	I can participate on social networks and use most of their features.	52	48
g.	Can you produce text using a word processing programme (i.e., email a file to someone/student or a teacher)?	82	18

These discussions are based on the data collected from the respondents. The first table is based on the students' computer/ICT experience. The respondents (students) have shown that the majority of them had used either a computer or a technological device before as 95% of the total respondents ticked "Yes" while only 5% of the total respondents ticked "No".

Question "b" on the students' computer / ICT experience shows that almost all the respondents are aware that the computer is a vital tool for language learning. This

is shown as 90% of the respondents ticked “yes” while 10% of the respondents ticked “No”

Question “c” on the students’ computer and ICT experience demonstrates that the majority of the respondents use computers for other things as 82% of the total respondents ticked “yes” for question “c” while 18% ticked “No”. It implies that the majority of the people do not use their computers for language learning.

Question “d” illustrates that the majority of the respondents use computers outside the four walls of the school. This is supported as 86% of the respondents ticked “yes” while 14% ticked “No” for question “d”.

Question “e” shows that many of the respondents can effectively use computers without guidance from anyone as 76% of the respondents ticked “yes” while 24% ticked “No”. It means that computer literacy is very high in the world as observed in this question.

In question “f”, 52% of the respondents ticked “yes” and 48% ticked “No”. The implication of the responses in this question implies that the average number of people can use the social network with all its features. From observation above, many make use of social networks, but they cannot use all its features efficiently.

Question “g” shows that a good number of the respondents can use word processing programmes to produce text. This is illustrated as 82% of the respondents ticked “yes” while 18% ticked “No”.

TABLE 2**ACTIVITIES RELATED TO SCHOOL WORK**

This segment is divided into three sections. This segment aims to consider the activities of the respondents (students) in relation to their schoolwork. The segment will be considered under A, B, C and each of the sub-segment addresses different issues.

TABLE 2.1**ACTIVITIES RELATED TO SCHOOL WORK**

S/N	A. HOW OFTEN DO YOU DO THE FOLLOWING AT SCHOOL?	NEVER	AT LEAST ONE A MONTH	AT LEAST ONCE A WEEK	EVERYDAY
i.	Use a desktop computer, laptops, internet, etc for English language class lessons.	14%	10%	56%	20%
ii.	Search the internet for information during lessons or homework's	8%	6%	30%	56%
iii.	Use the computer for language oral drills and presentations.	30%	4%	56%	10%
iv.	Use the internet for sound production in phonetics (sound and symbols)	22%	18%	44%	6%
v.	Do exercise/tasks individually or a group using the internet.	16%	14%	54%	16%

vi.	Participate in online essay writing and reading skills development.	36%	32%	22%	10%
vii.	Do you have online learning platforms aside from classroom teaching (WhatsApp group, online class assignment submission, virtual class meetings, etc.)	8%	12%	20%	60%

The table 2.1 of this segment considers how often the respondents do some activities in their various schools. The first question on this sub-segment considered how often the respondents make use of desktop computer, laptop, internet and other for the English language class lesson. Out of the total respondents, 14% ticked “Never”, 10% attested that they use a computer for the school lesson “At least once in a week” and 20% of the respondents use the computer for school lessons Every day. This question illustrates that the usage of computers for daily schoolwork is very low as only 20% of the respondents use the computer every day and majority (56%) of the respondents have access to the computer for schoolwork once in a week.

In question (ii), 8% of the respondents searched the internet for information during lessons or HomeWorks, 6% ticked “at least once in a month, 30% ticked “at least once in a week while 56% ticked “everyday”. From the foregoing, it can be concluded that the majority of the respondents use the internet to get information on a daily basis. Question (iii) on the other hand shows that the majority of the respondents do not use computers for oral drills and presentations on a daily basis. This is shown as 30% of the of the respondents ticked “never”, 4% ticked "at least once a month", 56% ticked “at least once in a while for oral drills and presentations just on weekly basis and not on daily basis.

In question (iv), 22% of the total respondents ticked “never”, 18% ticked “at least once a month”, 44% ticked “at least once a week” and 16% ticked “everyday”. It is shown from the responses here that many of the respondents (44%) use the internet for sound production in phonetics and 22% do not use their internet for sound production at all. Question (v) affirms that the majority of the respondents use the internet to do their exercises/tasks on a weekly basis. This is indicated in this question as 16% ticked “never”, 14% ticked “at least once a month”, 54% ticked “at least once a week” and 16% ticked “everyday”

In question (vi), 36% of the respondents ticked “Never”, 32% ticked “At once a month”, 22% ticked “At least once a week”, while only 10% ticked “Everyday”. The implication of the statistics of this question is that the respondents do really participate in online essay writing and reading skills development as frequently as it is expected.

Question (vii) shows that 8% of the respondents ticked “Never”, 12% ticked “At least once a week” and 60% of the respondents ticked “Everyday”. From the above responses, it is evident that a very large number of the respondents (60%) have online learning platforms where they learn every day.

TABLE 2.2

S/N	B. Do you consider using ICT (computer, internet, projectors, language learning apps etc.) during English language lessons has a positive impact on the following?	Not at all	A little	Maybe	A lot
i.	You concentrate more on what you are learning.	–	26%	10%	64%
ii.	You remember more easily what you’ve learnt.	–	30%	6%	64%
iii.	It enables you to work better with other students on tasks and presentations.	4%	26%	16%	54%
iv.	It improves the atmosphere in the class (students are more engaged with less distraction)	–	38%	12%	50%
v.	Connecting and learning from native speakers will boost my language proficiency	–	12%	16%	72%
vi.	Access to globalization will improve language learning	–	8%	20%	72%

Table 2.2 of activities relating to schoolwork illustrates how the respondents use ICT during English Language lessons and its impact on Language learning. This part considers a total of six (6) questions which will be explained one after the other.

Question (i) in this segment considers how the respondents concentrate on what they are learning. 26% of the respondents ticked “A little”, 10% ticked “maybe” and 64%

ticked “A lot”. The implication of the high responses here is that many of the respondents concentrate when they are being taught.

Question (ii) Moves further to inquire how much the respondents remember what they have learnt; 30% of the respondents ticked “A little”, Only 6% ticked “maybe” and 64% ticked “A lot”. It is evident that a good number of the respondents remember very well what they have learnt.

In question (iii), 4% ticked “not at all”, 26% ticked “A little”, 16% ticked “maybe” while 54% ticked “A lot”. The implication of the high response in this question shows that ICT enables the respondents to work better with other students on tasks and presentations. Question (iv) of this sub-segment dwells on how ICT has improved the atmosphere of the classes of the respondents. 38% of the respondents ticked “A little”, 12% ticked “maybe” and 50% ticked “A little”, 12% ticked “maybe” and 50% ticked “A lot”. This question has illustrated that ICT improves the atmosphere of the class by engaging the respondents in the class activities.

Question (v) shows that 12% of the respondents ticked “A little”, 16% ticked “maybe” and 72% ticked “A lot”. This implies that connecting and learning from native speakers will boost language proficiency as 72% of the total respondents ticked “A lot”.

The last question on this segment, question (vi), asks how the access to globalization will improve language learning. 8% of the respondents marked "A little", 20% marked " Maybe" while 72% marked "A lot". Going by the responses on this question, it is shown that the majority of the respondents agree very well that globalization will improve language learning.

TABLE 2.3

S/N	C. Thinking about your experience or the knowledge you have gained on the importance of the computer to digital learning, to what extent do you agree with the following statements?	Strongly disagree	Disagree	Agree	Strongly agree
i.	It is important for me to work with a computer for language learning.	—	14%	54%	32%
ii.	Using a computer for language learning is a fun and relaxed way of learning.	2%	6%	30%	62%
iii.	Language apps can help with correct pronunciation of words and sentences of my target language.	2%	4%	38%	56%
iv.	Computers for language learning will aid language practice and production.	—	6%	36%	58%
v.	The use of the internet and technology at school will make teaching flexible and motivate learning.	—	6%	44%	50%

The last sub-segment part (part C) on the activities of the respondents relating to schoolwork will be discussed below. It should be observed that this part will dwell on thinking about the experience of the respondents and the knowledge they have

gained on the importance of the computer to digital learning. Five (5) questions will be examined in this part of the questionnaire.

As shown in table 2.3 above, 14% of the total respondents disagree that it is important for them to work with a computer for language learning as shown in question (i) of this segment, 54% ticked “Agree” and 32% of the respondents “Strongly Agree” with the question. From the foregoing, a total of 86% of the respondents agreed that it is really important for the respondents to work with a computer for language learning.

Question (ii) of this segment focuses on whether using a computer for language learning is a fun relaxed way of learning. 2% of the respondents strongly disagree, 6% disagree meaning that a total of 8% of the respondents disagree with question (ii) while 30% of the respondents agreed and 62% strongly agreed. This implies that using a computer for learning is a fun and relaxed way of learning because a total of 92% of the respondents agree with question (ii).

In question (iii), 2% of the respondents strongly disagree and 4% of the respondents disagree meaning that 6% of the total respondents disagree that language apps can help with correct pronunciation of words and sentences of the targeted language. On the other hand, 38% of the respondents agree and 56% of the respondents strongly agree, that is, 94% of the respondents agree, that is, 94% of the total respondents agreed that language apps can help with correct pronunciation of words and sentences of the targeted language.

Question (iv) focuses on whether the computer will aid language practice and production. In this question, 6% of the respondents disagreed with the question while 36% ticked agreed and 58% of the respondents strongly agreed. That is, a total of 94% of the respondents agreed that computers for language learning will aid language practice and production.

The last and final question on the students' questionnaire explores whether the use of the internet and technology at school will make teaching flexible and motivate learning. In this question, 6% of the respondents disagree while 44% agree and 50% of the respondents strongly agreed. With this, a total of 94% of the respondents agreed with the question.

4.3 TEACHER'S QUESTIONNAIRE

This part of the questionnaire dwells on reactions from English language teachers. A total of fifty (50) teachers were sampled from ten (10) different schools. The analysis of the table will be discussed below.

In table 3.1 of the teacher's questionnaire, the personal information of teachers was considered. 30% of the total respondents (teachers) were under thirty (30) years old, 45% of the respondents were between thirty (30) to thirty-nine (39) years old, 20% were between forty (40) to forty-nine (49) years old and 5% were above fifty (50) years old.

Gender equality was considered during the administration of this questionnaire as 50% of the respondents were males and 50% were females. Furthermore, the average number of students taught by the respondents (teachers) was also put into consideration as only 10% of respondents teach below ten (10) students, 30% of the respondents teach between ten (10) to fifteen (15) students, 45% of the respondents teach between sixteen (16) to twenty (20) students and 15% of the respondents teach more than twenty (20) students. The teaching hours of respondents was also considered during this research. 40% of the total respondents teach below ten (10) hours per week and 60% of the respondents teach between ten (10) to fifteen (15) hours per week.

TABLE 3.1

S/N	PERSONAL INFORMATION	Under 30	From 30-39	From 40-49	50 or more
1.	Age	30%	45%	20%	5%
2.	Gender	Male 50%	Female 50%		
3.	Average number of students per class	Fewer than 10 10%	10-15 60%	16-20	More than 20%
4.	Teaching hours per week	Fewer than 10 40%	10-15 60%	16-20	More than 20%

During this research, the teaching experience and method used by the respondents was focused on. 90% of the respondents attested that they make use of computers or the internet in the preparation for their lesson and 10% of the respondents do not make use of either the computer or the internet in preparing their lessons. 65% of the respondents ticked “yes” that they use the computer or internet with their students during class teaching while 35% of the respondents do not make use of the computer or the internet with their students during class teaching. The number of years that the respondents had been using the computer or internet was also considered during this research as 5% of the respondents had been using the computer or internet for more than one year, 45% of them had been using it between two (2) to four (4) years while

50% of the respondents had been using the computer or internet for more than four (4) years. It is evident from the above data that all the respondents have been using the computer or internet at their various schools though the time of usage differs.

This research also considers how often the respondents use the computer as a language learning tool in their various classes. 20% of the respondents ticked “Never”, 10% ticked “rarely”, 30% ticked "Sometimes" and 40% ticked “Always”. From the above, it shows that the majority of the respondents make use of computers as a language learning tool though the frequency of the usage varies. The respondent’s awareness of computers and other technological devices as tools that can aid language teaching and learning was considered during this research as 100% of the respondents confirm that they are aware of the computer as a tool for language teaching and learning.

Another aspect of the teacher’s questionnaire inquiries about the types of equipment that is available to them during class teaching. 25% of the respondents ticked “Never” meaning that students are not equipped with computers, 25% of the respondents also ticked “Rarely”, it implies that their students rarely have computers during class teaching, 35% ticked “Often” while 15% ticked always. A question was also asked from the respondents whether only the teachers use computers. 15% of the respondents ticked “Never”, 25% ticked “Rarely”, 40% ticked "Sometimes" and 10% ticked "Always". At one point, it was asked whether both the teachers and the students use computers. 30% of the respondents ticked “Never”, 25% ticked “Rarely”, 30% ticked "Sometimes" and 15% of the respondents ticked “Always”.

The respondents were asked which equipment they have access to. 65% of the respondents marked “Yes”, which states that they have Desktop computers without internet access while 35% marked “no”. On the other hand, 45% of the respondents

marked “yes” that they have desktop computers with internet access while 55% marked “No”. It implies that the majority of the respondents have desktop computers without internet access. 50% of the respondents ticked “yes” in respect of usage of Non-internet connected laptop, tablet pc, notebook, and iPad, and 50% also ticked “No” for the same question. The respondents were asked if they have access to an E-reader (a device to read books and articles on screen). 40% of the respondents ticked “yes” while 60% ticked “No” meaning that the majority of the respondents do not have access to E-reader.

In addition, 30% of the respondents confirm that the schools provide mobile phones for them by ticking “Yes” while 70% ticked “No”. It is evident that the majority of the respondents get mobile phones by themselves. The use of interactive whiteboards was also asked from the respondents. 35% of the respondents marked “Yes” and 65% marked “No”. It is shown that the majority of the respondents do not have access to interactive whiteboards in their schools. The respondents were also asked if they have Language laboratories in their various schools. 20% of the respondents ticked “Yes” while 80% ticked “No”. The responses above show that the majority of the respondents’ schools do not have language laboratories. The respondents ticked 35% “Yes” for the student's response system (e.g., Active expression or other) and 65% ticked “No” for the same question.

TABLE 3.2

	TEACHING EXPERIENCE AND METHODS			YES	NO
5.	Do you use computers or the internet for the following activities?				
i.	Preparing lessons.			90%	10%
ii.	Class teaching with the students.			65%	35%
		Less than a year	More than a year	Between 2 to 4 years	More than 4 years.
6.	For how many years have you been using a computer or the internet at any school?	—	5%	45%	50%
7.	How often do you use computers as a language learning tool in your classes?	Never 20%	Rarely 10%	Sometimes 30%	Always 40%
				YES	NO
8.	Are you aware than the computer and other			100	
9.	When you use the computer during class teaching with the students, which equipment is available?	Never	Rarely	Often	Always
	Students are equipped with computers	25%	25%	35%	155
	Only the teacher uses a computer	15%	35%	40%	10%
	Both teacher and students use computer	30%	25%	30%	15%

10.	Which do you have access to in your classes?		
		YES	NO
	Desktop computer without internet access	65%	35%
	Desktop computer with internet access	45%	55%
	Non-Internet connected laptop, tablet Pc, notebook, iPad.	50%	50%
	E-reader a device to read books and articles on screen.	40%	60%
	Mobile phone provided by the school	30%	70%
	Interactive whiteboard.	35%	65%
	Language laboratory	20%	80%
	Student's response system (e.g., Active Expression or other.)	35%	65%

The concluding segment of the teachers' questionnaire centres on how often the respondents do some activities. The respondents were asked whether they browse or search the internet to collect information to prepare lessons. 15% of the respondents ticked "Rarely", 40% ticked "Sometimes" and 45% ticked "Always". It indicates that the respondents make use of internet information to prepare lessons. 25% of the total respondents marked "Rarely" 45% ticked "Sometimes" and 30% ticked "Always", this is as to whether the respondents browse the internet to collect resources to be used during lessons. In another question, the respondents were asked if they use applications to prepare presentations for lessons. In this question, 15% of the respondents ticked "Never", 35% ticked "Rarely", 20% ticked "sometimes" and 30% ticked "Always". It implies that the majority of the respondents do not use applications to prepare presentations for their various lessons.

Also, the respondents were asked whether they create their own digital learning materials for students. 25% of the respondents marked “Never”, 30% marked Rarely, 30% marked “sometimes” and only 15% marked “Always”. The respondents were asked if they create personal online platforms for their students. 35% of the respondents ticked “Never”, 25% ticked “Rarely”, 30% ticked “Sometimes” and only 10% ticked “Always”. It is evident here that only a few schools of the respondents use the school website or create personal online platforms for their students. The respondents were further asked how often they access and evaluate digital learning resources in the subject they teach. 15% of the respondents ticked “Never”, 30% ticked “Rarely”, 30% ticked “Sometimes” and 25% ticked “Always”.

The respondents were also asked if they use professional platforms in language teaching and development. 20% of the respondents ticked “Never”, 10% ticked “Rarely”, 20% ticked “Sometimes” and 50% ticked “Always”. It is shown in this question that a good number of the respondents use professional platforms in language teaching and development. 15% of the respondents ticked “Never” when they were asked if they use language learning apps to aid and boost their language learning, 5% ticked “rarely” 40% ticked “sometimes” and 40% ticked “always” for the same question. It is shown that the majority of the respondents try to improve their language skill with language learning apps. The last and final question on the teachers’ questionnaire inquires if the respondents motivate their students to use computers and apps to develop their language learning. 5% of the respondents ticked “sometimes” and 50% ticked “always”. From the foregoing, it is evident that all the respondents motivate their students to make use of computers and apps to develop language learning.

TABLE 3.3

11.	How often do you do the following activities?				
		Never	Rarely	Sometimes	Always
	Browse/search the internet to collect information to prepare lessons.	–	15%	40%	45%
	Browse the internet to collect resources to be used during lessons.	–	25%	45%	30%
	Use applications to prepare presentations for lessons.	15%	35%	20%	30%
	Create your own digital learning materials for students.	25%	30%	30%	15%
	Use the school website or create personal online platforms for your students.	35%	25%	30%	10%
	Assess and evaluate digital learning resources in the subject you teach.	15%	30%	30%	25%
	Use online professional platforms in language teaching and development	20%	10%	20%	50%
	Use language learning apps to aid and boost your language teaching.	15%	5%	40%	40%
	Motivate your students to use computers and apps to develop their language learning	-	–	50%	50%

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter elucidates the summary, conclusion, and recommendations of the finding of this research work. This research work deals with the impact of computer assisted language learning and mobile assisted language learning on enhancing second language acquisition in Nigerian schools; effect on students' communication skill. The student and teachers at some selected secondary school in south-west Nigeria were used as the targeted population for the research findings

5.1 SUMMARY

The overall aim of this research study is to assess the impact of computer assisted language learning or mobile assisted language learning on second language learning in Nigerian schools, in relation to its effect on the students' communication skill.

The options available for the need of CALL/MALL in Nigeria, and its effects are brought to bear. How effective CALL/MALL is in Nigeria, how CALL/MALL can be improved in Nigeria and the effects it will have on Nigerian students who are second language learners. The steps or things to put in place for effective usage of CALL/MALL in Nigeria is also discussed in this research work.

From the information gathered so far, it is pertinent to say that CALL/MALL is very vital and relevant in the acquisition of English language in Nigeria. It is observed that there are some factors militating against the adequate use of CALL/MALL in the case of Nigeria. Nonetheless, these factors can be surmounted if taken into proper consideration.

5.2 CONCLUSION

Presently in Nigeria, it is a crystal-clear fact that the majority of Nigerians are aware of the usage of CALL/MALL and the possible effect it can bring on the second learners of English language. Currently in Nigeria, many schools and people are making use of the computer and some other technological devices for learning especially in the acquisition of English Language as a second language. For learners of the English language in Nigeria to meet up with the global standard of CALL/MALL, everyone including Nigerians, need to try at all costs to work on the challenges of inadequate use of CALL/MALL in Nigeria.

Educational institutions too are expected to brace-up on acquiring the necessary and important tools and apps for language learning. The acquisitions of these devices will further give a boost to usage of CALL/MALL in Nigerian schools and the country at large. The adequate use of CALL/MALL with the vital devices in-place will aid the acquisition of English language learning in no small measure. To this end, all hands must be on deck for the proper usage of CALL/MALL and all educational sectors should make the usage of CALL/MALL a priority so as to further boost English language learning and acquisition in Nigeria.

5.3 RECOMMENDATIONS

I am sure with my singular belief that Nigeria can achieve the adequate use of CALL/MALL which will boost the acquisition and proficiency of English language learning. My conviction is hinged on the fact we have means and good reasons to adopt the adequate use of CALL / MALL in Nigeria. Below are my recommendations concerning computer Assisted language learning / mobile Assisted language learning

Computer Assisted language learning /mobile assisted language learning should be properly integrated into Nigeria education curriculum. With the inclusion of computer Assisted language learning / MALL into the curriculum, it will be made mandatory for all schools to use CALL/MALL for English language acquisition.

Computer and technological devices are to be made available to both the students and teachers. This will in-turn boost the usage of CALL/MALL in Nigeria.

All computers and technological devices should be internet connected so as for both the students and teachers to be able to make further research online when need be.

There should be creation of more awareness about CALL/MALL, thus will further enhance language learning in Nigeria.

The teachers should be encouraged to use CALL/MALL in Language acquisition. When teachers make use of CALL/MALL it will encourage the students to follow suit.

The educational institutions should be encouraged to acquire language laboratories of good standard with the acquisition of language laboratories, more people will be interested in acquiring English language as a second language.

There should be provision of interactive whiteboards in all educational institutions. This will boost and attract the attention of the students during teaching and learning. It has been observed that most students learn more with what they see.

The teachers should be encouraged to use the computer and internet in preparing the lessons and they should create online assessment platforms for their students.

Both the teachers and the students should be encouraged to use an E-reader on a regular basis for better acquisition of English language learning.

The Education Institutions in Nigeria should provide mobile phones and relevant technological gadgets for teachers in their various schools so that all teachers will have access to the use of CALL / MALL during their lessons.

Further research works and journals relating to CALL / MALL development and integration into language teaching and learning process is highly recommended.

On the final note, if all the above listed recommendations are put into proper consideration, CALL / MALL will be optimally used for language learning in Nigeria. The use of CALL / MALL will definitely boost language learning proficiency in second language acquisition.

APPENDICES

6.1 APPENDIX 1: RESEARCH QUESTIONNAIRE

As part of my M.A Research Thesis at Universitat Rovira i Virgili, Tarragona, Spain. I am conducting a survey to investigate the impact of Computer Assisted Language Learning (CALL) on Second Language Acquisition in Nigerian schools. This paper is based on the need to carry out research on teacher-student awareness of Computer Assisted Language Learning (CALL) and Mobile Assisted Language Learning (MALL) and the impact it has/will have on Second Language Acquisition in Nigerian Schools.

I would appreciate it if you could complete the following table. Any information obtained in connection with you during this survey will be treated confidential.

Respondent's Details:

Age: ----- Gender: Male/Female

Class: ----- School: -----

1. COMPUTER/ICT EXPERIENCE (please indicate yes/no for this section)

a. Have you used a computer or any technology device (laptops, note pads, iPad) before?

YES/NO

b. Have ever been told or know that the computer can be used as a vital tool for language learning?

YES/NO

c. I use the computer mostly for other things except language learning. **YES/NO**

d. Have you used the computer/internet outside school (at home, with a friend, internet café, public library etc)?

YES/NO

e. I can use the computer effectively without guidance from anyone.

YES/NO

f. I can participate on social networks and use most of their features.

YES/NO

g. can you produce text using a word processing programme (i.e. email a file to someone/student or a teacher)?

YES/NO

2. ACTIVITIES RELATED TO SCHOOL WORK.

(For this section, please tick the option most suitable for you).

A. How often do you do the following at school:

	Never	At least once a month	At least once a week	Everyday
Use a desktop computer, laptops, internet, etc for English language class lessons				
Search the internet for information during lessons or HomeWorks.				
Use the computer for language oral drills and presentation.				
Use the internet for sound production in phonetics (sound and symbols)				
Do exercises/tasks individually or as a group using the internet				
Participate in online essay writing and reading skills development.				
Do you have online learning platforms aside classroom teaching (WhatsApp group, online class				

assignment submission, virtual class meetings, etc)?				
--	--	--	--	--

B. Do you consider using ICT (computers, internet, projectors, language learning apps etc) during English language lessons has a positive impact on the following?

(please tick the option most suitable for you in the column)

	Not at all	A little	maybe	A lot
You concentrate more on what you're learning.				
You remember more easily what you've learnt.				
It enables you to work better with other students on tasks and presentations.				
It improves the atmosphere in the class (students are more engaged with less distraction)				
Connecting and learning from native speakers will boost my language proficiency.				
Access to globalisation will improve language learning.				

C. Thinking about your experience or the knowledge you have gained on the importance of the computer to digital learning, to what extent do you agree with the following statements?

(please tick the option most suitable for you in the column)

	Strongly disagree	Disagree	Agree	Strongly agree

It is really important for me to work with a computer for language learning.				
Using a computer for language learning is really fun and relaxed way of learning				
Language apps can help with correct pronunciation of words and sentences of my target language.				
Computer for language learning will aid language practice and production.				
The use of the internet and technology at school will make teaching flexible and motivate learning.				

6.2 APPENDIX 2: TEACHER QUESTIONNAIRE

Please read and answer each question carefully. All responses are anonymous and will be treated confidential.

Thank you very much for your collaboration. Your input is really important for this survey.

PERSONAL INFORMATION:

Age:

- ☐ Under 30
- ☐ From 30-39
- ☐ From 40-49
- ☐ 50 or more

Gender:

- ☐ Male
- ☐ Female

3. Average number of students per class:

- ☐ Fewer than 10
- ☐ 10-15
- ☐ 16-20
- ☐ 20 or more

4. Teaching hours per week:

- ☐ Fewer than 10
- ☐ 10-15
- ☐ 16-20
- ☐ More than 20

TEACHING EXPERIENCE AND METHODS.

5. Do you use computers or the internet for the following activities? (please indicate YES/NO).

- | | | |
|---------------------------------------|-----|----|
| i. preparing lessons | YES | NO |
| ii. class teaching with the students. | YES | NO |

6. For how many years have you been using computers or the internet at any school?

- ☐ Less than a year
- ☐ More than a year
- ☐ Between 2 to 4 years
- ☐ More than 4 years.

7. How often do you use computers as a language learning tool in your classes?

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Always

8. Are you aware that the computer and other technology devices serves as tools that can aid language teaching and learning?

- ☐ Yes
- ☐ No

9. When you use the computer during class teaching with the students, which equipment is available? (please tick the option most suitable in the column).

	Never	Rarely	Often	Always
Students are equipped with computers				
Only the teacher uses a computer				
Both teacher and students use computers				

10. Which do you have access to in your classes?

	Yes	No
Desktop computer without internet access		
Desktop computer with internet access		
Non-internet connected laptop, tablet PC, notebook, iPad		
E-reader (a device to read books and articles in screen)		
Mobile phone provided by the school		
Interactive whiteboard		
Language laboratory		
Student response system (e.g. ActivExpression or other))		

11. How often do you do the following activities?

	Never	Rarely	Sometimes	Always
Browse/search the internet to collect information to prepare lessons.				
Browse the internet to collect resources to be used during lessons.				
Use applications to prepare presentations for lessons.				
Create your own digital learning materials for students.				
Use the school website or create personal online platforms for your students.				
Assess and evaluate digital learning resources in the subject you teach.				

Use online professional platforms in language teaching and development.				
Use language learning apps to aid and boost your language teaching.				
Motivate your students to use computers and apps to develop their language learning.				

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