CHAPTER ONE

1.0 Background

This chapter provides the theoretical framework of the study. It includes the statement of the study problem, the study questions, the hypotheses of the study, objectives of the study, the significance of the study, the limits of the study and the research methodology.

1.1 Overview

Over the last twenty years much has been done in the field of vocabulary in the context of the acquisition of foreign or second languages (L2). Recurrent research themes over the past two decades include: the construct of vocabulary knowledge, e.g. the distinction between receptive and productive knowledge, and between knowledge and use (Henriksen 1999, Read & Chapelle 2001); the relationship between vocabulary knowledge and language proficiency, particularly in respect to reading (Hazenberg & Hulstijn 1996, Hu & Nation 2000); the role of word frequency in vocabulary learning, e.g. the cost benefit of learning frequent, infrequent and specialized words (Coxhead 2000, Nation 2001); task eŸect on learning, e.g. task induced involvement (Hulstijn & Laufer 2001, Laufer & Hulstijn 2001); the use of dictionaries, paper and electronic, (Bogaards 1991, Chun & Plass 1996, Knight 1994); interactive tasks (Ellis, Tanaka & Yamazaki 1994); explicit versus implicit learning (Ellis 1994); incidental versus intentional learning (Ellis & He 1999, Horst, Cobb & Meara 1998, Kelly 1986, Qian 1996); learning new words versus learning new meanings of already known words (Bogaards 2001); patterns of vocabulary development over time (Laufer 1998, Meara 1997,

Palmberg 1987, Schmitt 1998); strategies used by learners to comprehend and learn new words (Cohen & Aphek 1981, Sanaoui 1995, Schmitt 1997); and testing vocabulary knowledge: size and depth, receptive and productive (Bogaards 2000, Laufer & Nation 1995, 1999, Nation 1983, Read 1993, 2000, Wesche & Paribakht 1996). The growth of interest in L2 vocabulary since the days of 'a neglected aspect of language learning' (Meara 1980) has also been reflected in authored and edited books specially devoted to vocabulary (Arnaud & Béjoint 1992, Bogaards 1994, Coady & Huckin 1997, Hatch & Brown 1995, Nation 1990, 2001,Schmitt & McCarthy 1997, Schmitt 2000, Read 2000).

1.2 Information and Communication Technology (ICT)

However, very little is said about the use of the internet to enhance vocabulary learning compared with the huge amount of research above.*Information communications technology* (ICT) has been found to be one of the most potent tools for promoting equity and access to education, and a great resource in bridging the gap of the digital divide. ICT affects almost all of our everyday activities, be it business, defense, or space exploration. Being informed of the latest information has become essential for survival. Educational enterprises also benefit from the advantages and technological learning tools offered by ICT. ICT is indispensable for creating effective distance education learning environments. Consequently, the developments in *human computer interaction* (HCI) now assume greater significance, with our increasing reliance on the plethora of smart electronic devices that enable seamless access to our computer files from almost anywhere, anytime. Since the advent of the Internet, geographical boundaries no longer present barriers to communication. Today, there is more awareness for effective HCI through the increased laptop usage that is emerging as a common place

information management tool. Moreover, laptop computers are already being adopted for basic operations in and around the home for e-mail, scanning interesting materials for school homework projects, and controlling household appliances.

Today the information and communication technology (ICT) has been increasing very rapidly. The result of this unprecedented growth of technology has covered every part of academic, social life and learning area. It has crept for example to cover presentation of information, tasks, assignments, interaction and performance of learners. Moreover, these new technologies have had the effect of increasing interaction amongst students around the world, reducing cost and all types of unpredictable obstructions which are likely to come up.

1.3 Statement of the Study

Vocabulary learning is no longer a problem as viewed from the point of view of the vast opportunities made possible by the internet. Products of modern technology of the digitalized world are rapidly finding their ways into our classroom settings. The wide use of Smartphones, portable devices has undoubtedly challenged the ways of traditional learning in countless ways (Kukulska 2008)

Internet learning is one of the important new educational methods that influence our normal daily study. The adoption of a wide-based web tools has given rise to the tendency of e.learning in education worldwide (Yuen etal..2009). Hence, in this study the factors affecting the use of the internet as a tool of learning to maximize undergraduate students' grasp of vocabulary will be explored. This will be handled from the learners and tutors' perception, namely at the Colleges of Languages. The study also seeks to examine the obstructions hindering learners from relying on the internet a massively rich source of information.

1.4 Objectives of the Study

This study aims to explore the following set of objectives:

1. To determine the learners' attitudes towards the use of the internet to enhance English language learning general and vocabulary in particular.
2. To explore the teachers' attitudes towards the internet learning.
3. To validate the benefits of the internet in learning English
4. To identify the obstacles hampering the use of the internet as a useful tool of English language learning.

1.5 Significance of the Study

This study derives its significance from the topic in question which seeks to adopt the internet as a tool of learning considering both theory and practice. This theme which calls for incorporating the internet into English language learning is barely touch upon in Sudanese learning institutions and seem to house no such substantial and reliable resources in the subject under investigation. As regards the ongoing progression in the technological devices which are extensively harnessed to classroom settings worldwide as beneficial tools of learning, the possibility of adopting these gadgets in Sudan seems to be very slender and much unlikely. There are of course factors influencing the incorporation of the internet, namely economic ones which hinder the establishment of the required infrastructure for such kind of learning.

The insights to be obtained from the current research will be of great use to education experts, educators, syllabus and curricula designers and classroom practitioners among others. The study sheds light on the vast utility to be acquired from the adoption of the internet in learning settings not mention the valuable effect of sharpening the minds of educational

policy makers who to a greater extent belong to the generation that harbor pronounced hatred to this fledgling field of learning in our country. The tools linked with internet are plentiful and are ever increasing very rapidly including a wide-range of products right from the mobile phones to satellite channels. Quite a big number of educators sight the products of modern technology from the viewpoint of entertainment. The inclusion of the fruits of modern technology is challenging form a number of levels right from improving students' opportunity of learning to providing policymakers and educators with insight into devising coherent strategic plans to revolutionize education across the country.

1.6 Research Questions

1. To what extent do students and tutors view positively the incorporation of the internet into Sudanese classroom settings?
2. What are the expected barriers that hinder Sudanese learners from adopting the internet in their learning settings?
3. To what extent are Sudanese educational policymakers and experts convinced with the benefit of the internet as a learning tool?

1.7 Research Hypotheses

1. Students and tutors have a positive attitude towards the use of the internet as a useful learning tool.
2. There are barriers that hinder Sudanese learners from adopting the internet in their learning settings.
3. Sudanese educational policymakers and educators are convinced with the benefit of the internet as a useful tool of learning.

1.8 Limits of the Research:

This study include certain limitations which may affect the results. Firstly, this study is limited to the students of Sudan University of

Science and Technology in Khartoum (case study). Secondly, this study is limited to the students of level four at the department of English. Finally, this study is limited to the development of undergraduates' English learning in general and vocabulary learning in particular through the Internet resources in teaching and learning situations.

1.9 Research Methodology

This study is dealt with field of knowledge, the internet which is directly aligned with an important issue that of learning and education. There are quite a number of factors which are responsible for the delay of the incorporation of the internet in Sudanese educational institutions. Data to inform the present research will be collected by two instruments. A questionnaire for tutors and t-test for students. Students will be asked to use the internet to understand the difficult points and lexical items from electronic dictionaries.

1.10 Summary of the Chapter

This chapter is considered as an introduction of this study. In this chapter, the problem of the study is stated, its objectives are shown, and its hypotheses are designed. The methodology of study is also clarified. In the next chapter the previous studies and literature review will be conducted.

CHAPTER TWO

LITERATURE REVIEW

This chapter reviews relevant literature on the issue of Web-based learning and the hurdles learners are probably apt to come across. Important findings and arguments from opponents and proponents of an English-only teaching method will be discussed. The chapter is divided into two parts, the first one is on the theoretical framework, and the other is on previous studies.

Part One: Theoretical Framework
Part Two: Previous Related Work
2.1.0 Overview

The rapid growth and advancement of technologies has presented humans with enormous opportunities for application in education, including language learning. (Golonka, Bowles, Frank, Richardson, & Freynik, 2012). At the same time, it inspires new inquiry about how languages are learnt in cyberspace, one of which is learners' interaction with instructors and peers, including both native and non-native speakers of the target language. (Meskill & Quah, 2013). The focus of the current research is to investigate interpersonal interaction in an online English language learning environment for EFL learners.

The interaction has increasingly become one of the most critical elements of learning experiences, both in traditional face-to-face and online learning environments (Gass &Mackey, 2006; Moore, 1989; Woo & Reeves, 2007). In an online environment, due to the separation of time and space, instructors and learners have to rely on technology to interact with each other synchronously or asynchronously for different teaching and learning purposes. (Gao, Zhang, & Franklin, 2013; Oztok, Zingaro, Brett, & Hewitt, 2012). The integration of Computer-Mediated Communication (CMC) into the teaching and learning of languages has proven beneficial to both instructors and learners. (Marden& Herrington, 2011; Son, 2006). Recent developments in the field of CMC, computer assisted language learning (CALL) and network learning have led to a renewed interest in the investigation about the role of interaction for online language learning (Wach, 2012; Wu, Yen, & Marek, 2011).The first serious discussions and analyses of online interaction emerged in the 1990s with Moore's (1989) identification of three types of interaction: learner–content, learner–learner and learner–instructor. Adding, Hillman

(1994) adds one more type, which was learner's interaction with the interface of an online course. These first studies led to a considerable amount of literature related to interaction in online learning in general and in online language learning in particular. To date, there has been an agreement among researchers that interaction is critical and forms the basis of effective practices in online learning environments. (Battalio, 2007; Beldarraina, 2006; Fulford & Zhang, 1993; Palloff & Pratt, 2007; Wise, Chang, Duffy, & Valle, 2004; Woo & Reeves, 2007). In online language learning, it has been reported by a number of researchers that interaction helps increase confidence, motivation and ability for learners to communicate with peers, especially with native speakers of the target language they are studying. (Wu & Liu, 2012; Wu & Marek, 2013; Wu et al., 2011).

In the Sudan, the setting of this study, English is a foreign language. Thus, language learners have limited opportunities to practice what is taught, especially with native speakers of English. In this context, language teaching institutions have increasingly sought to provide learners with online learning courses so that they can interact with content, peer and instructor – the three main types of interaction. (Moore, 1989). Studies have found that the use of CMC and networked learning can enhance learners' confidence in using English (Liu & Chen, 2007; Payne & Ross, 2005). This capability may be particularly important for our Sudanese students, where learners are not proactive in initiating inter actions (Le, 2011). In addition, more opportunities to interact can lead to increased linguistic production. (Lee, 2009), and improved social relationships with peers, including native speakers. (Belz, 2002). The text-based interaction environment is also less threatening to learners who are not fluent in speaking, which is the case for many Sudan learners of English.

2.1.1 Adopted Technological Tools

According to the growing needs to teach English at universities at different colleges with different specialization, technology has been enormously integrated in the field of language learning. In order to demonstrate the widespread technology in the arena of language learning and teaching,Samuels, (2013:3) states,

> *"We are experiencing another revolution in education: social media revolution in which people communicate in cyberspace through aural, visual and written discourse. Via Face book, You Tube, a blog or other venues, one can reveal interest, innermost feeling core values and straight forward opinions".*

Exploiting the fruits of technology in the field of language teaching and learning as manifested in the diverse gadgets such computers, handheld devices and smart-boards among others has been welcomed by a number of educators, linguists and educational experts.Carlson (2002), enumerated the following benefits:

> "Technology can speed up and increase the efficiency of arrange of non-instructional teacher's activities such as student attendance, grading, text book distribution and preparation administrative reports. It also can enhance the productivity of basic instructional tasks, such as preparing lesson plans and class out lines, developing quizzes and examinations and writing up comments on student papers and reports".

With reference to what Carlson stated it is apparent that he is not emphasizing the pedagogical uses of technology but the administration uses that help teachers to manage the tutorials. The educational implementation of technology such as creating the lesson plan and accessing the work sheet and exercises has become quite evident in the practice of a number of educational institutions.

Through the use of technology, both time and effort are saved. In addition the appearance and organization of a lesson plan or a learning material using technology is more professional which gives a favorable position to the educational use of technology. To advocate for the use of technology in language teaching, Muir-Herzig, (2004:117) states

> "With conditions where teachers are individually comfortable and at least somewhat skilled in using computers, where they allocate time for students to use computers as part of class assignments, computers are becoming valuable and well- functioning instructional tools".

According to the quotation above, the use of computers can help students to do different language learning tasks and can help create interest and cooperation between peers in the classroom. A very important contribution made for language teaching is the addition of CALL (Computer-Assisted language learning) into the methods of language learning and teaching. It is obvious from its terms that method entails how the computer can be used to help language learners improve their understanding of language. The free Computer-assisted language

learning (CALL) is the term which refers to any language learning activity involving a computer in significant role, including both tutor and tools uses. Levy (1997) puts CALL into interdisciplinary context including psychology, applied, computational. Linguistics, instructional technology and design. Encyclopedia traces the history of CALL as dated back to 1960s when software developers started to integrate computer into teaching and learning. In order to show the benefits of CALL in language teaching and how it can create learner's autonomy, Mutlu, (2013) states:

> " Computer-assisted language learning (CALL) ,…has been significant development in language teaching and learning …this information and communication technology encourages learners to share their learning experiences and to build upon their previous knowledge and therefore provides an appropriate framework for learners to understand, how learners become independent in learning".

Describing the advantages of CALL has brought into the English language classroom and how it fits the "Theory of multiple intelligence" Gaung, (2007:4) states:

> " The computer assisted language learning arouses student's intelligence by helping students to rate their strength and then select which CALL based materials they need and how to use them".

The rapid progress in technology has helped language education by creating new pedagogical techniques that help teachers to enhance teaching the basic language learning skills and vocabulary. The UNESCO Report provides the following definition for the multimedia:

> "Media in which spatial data (text, image and sound) are merged with temporal data (voice and video), by means of unifying object. The computer on the basis of this definition a much broader one with accent on the transportation of the media could be suggested". (UNESCO, 2000:143)

According to this definition, multimedia comprises three important media that can be mixed to gather in order to assist teaching and learning: (1) the computer with suitable software and application, (2) the video or sound (3) the networks link accessing the internet.

But we need for more descriptive term such as technology-enhanced language learning to improve students' achievement which is interest in all levels, especially in high education. Bush (1997) utilized the expression ‘‘technology-enhanced language learning " or TELL which suggests a more inclusive sense of technology and its impact on teaching and learning language. Therefore it is not just what the computer is able

to do that is a significant, but the interaction of the learner with the technology.

Making use of ICT when learning a language at the beginning of twenty-first century is, for most members of a fluent societies, an obvious, normal course of action. Just as technology has become woven into the everyday life, so language study has come to rely on forms of technological enhancement from audio and video recording to World Wide Web (www) resources. With each technological shift, each new software or hardware, new challenges are presented for teachers to improve delivery and enhance learning.

Technology-enhanced language learning is a recent term for what has been growing in foreign language education and second language acquisition circles. Technology use and applications in language learning have progressed from listening to cassette tapes to on line interaction. While many researchers indicate that technology-enhanced language learning, can be effective tools for language learning (Black, 1998, Bush & Terry, 1997, McCarthy, 1994, Bueno, 2003). Technology integration in education today include tutorials, presentation, software, interactive multimedia, the Internet, the World Wide Web (WWW) and real time communication has changed the possible technology applications in the classroom.

2.1.2 Internet-oriented Technology

The term Internet is basically stands for International Network. From broader sense Internet is an electronic community which connect people all over the world via computer network. The term has been defined in many perspectives. According to Macy et.al (2002.p.167) Internet is*:" a massive network or web of computers connected worldwide that allow users to share each other's information and programs, also called net".*
The Internet is a global community well-connected with computers from all size and shape, co-operated together to share information and data, Bilal and Tulba (2002.p.2) define Internet as:" *It is a network communication which connected people, information and computers all over the world"*

Technically, however, Internet can be defined as asset of protocol (IP). Moreover, Internet can be defined as a set of hardware which consists of computers, cables, telephone lines and fax modem linked together to

constitute a huge network. Internet adds imaginary flavor and taste to human life, Negroponte (1995.p.181) reports:

> " The agent of change will be the Internet, both literally and as a model of metaphor. The Internet is increasing not only as a massive and pervasive global networks but also as an example of something that has evolved with no apparent designer in charge, keeping its shape very much like the information of a flock of ducks nobody is the boss, and all the pieces are so far scaling and admirably".

Internet does not belong to any one and its popularity comes from the fact that it is accessible to everybody and required only modest knowledge to be used. People with different field of knowledge have started using the Internet to access information and data which are relevant to their fields. In addition, people Internet to develop their working habits and skills by enrolling to online courses with reasonable costs. But the most striking features of Internet is: its possibilities to connect people all over the world socially. Also, people use Internet for self-entertainment since Internet is occupied by magazines, newspapers, video clips, TV channels, movies, games, quizzes, puzzles, and much more. Daily, people browser site to advertise, sell and buy products, pay their bills and buy tickets. Doing all this services online, increases the number of uses day by day. The estimation of number of uses is somewhat unbelievable Negroponte (19995.p.181) reports:

> "Nobody knows how many people use the Internet because first of all it is a network of networks. As October, 1994, more than forty-five thousands networks were part of the Internet. There were more than 4 million host processors growing at more than 2 percent per quarter, but that is not helpful measure of estimating the number of users….one of those machines serves as public gate way to say, France's Minted System have additional 8 million potential users on the Internet….my guess is that 1 billion people will be connected by the year 2000 ".

2.1.2.1 The Emergence of the Internet

The Internet entered our life in the 20th century and has spread all over the world. It has emerged as one of the most astonishing communication technologies in 1960s.The idea was initiated by the US Ministry of Defense "Pentagon" during the cold war for the purpose of protection the country from outside threats and military action.

In 1969, a new project known as Advanced Research Project Agency Network (ARPANET) had been developed to establish small networks that links many sites to distribute and share information and data among different computers in swift and secure manners, Picciano (2006.p.138) reports:

> " The roots of the Internet can be traced to US Department of Defense 1960s concerned about establishing and maintaining communication system in the event of major disaster such as nuclear war, engineers and scientists from RandD UCLA and MIT designed "a dooms day" data communication system that would be decentralized and capable of functioning regardless of whether any single node or point in networks was no longer available ".

This design was adeparture from the common centralized data communication system that required center point to control the entire networks. Grans (1999) mentions:

> "The US Army designed the Internet to be a robust network. It should be able to survive attacks or natural disasters. Therefore, from the outset the Internet did not have a central computer, but consisted of networks of separate inter-linked computers. If one part of the infrastructure was damage, then this would not mean that the entire network would be affected. Data could simply be re-routed around the damage area. This designed principle is the strength of the Internet ".

Since 1960s, the Internet has passed through different stages of development and progress. These periods are explained by Picciano (2000, p.138-139) as follows:

- In1969, the Pentagon's Advanced Research Project Agency established the first node of this new network called Advanced Research Project Agency Networks (ARPANET).

-In 1970s the PAPA Net grew but was used essentially by governments officials, engineers and scientist connected with research for US Department of Defense.

-In early 1980s other international networks were being established in higher education, government and research communities such as (1) (BIT NET) was established by the city university of New York, Yet Yale university and IBM to link university main frame computers (2) Computer Science Network (CSNET) was founded by the US National

Science Foundations(NSF) and (3) National Aeronautics Space Agency (NASA).

-In 1983 Military Segment of ARPANET developed a separate network called MILNET and access to ARPANET was expanded to include other computers network world wide that used its standard protocol methods of transferring data.

-In 1990s, the Internet community has grown exponentially. The number of users was estimated to increasingly at rate of 20% month doubling every 5 to 6 months.

2.1.2.2 Role of Internet in Enhancing English Language Learning

Not long ago, we did not know much about the Internet, we could not imagine its facilities with it. Now we have got a lot of different kinds of literature about Internet telecommunication technologies for various purposes, instructions for teachers showing how to use in teaching and learning process, popular scientific literature, advertisement etc. The Internet offers important and basic services for communication such as: e-mail, computer conferencing, news and facilities for accessing and sharing information such as World Wide Web (www).

The Internet provides us with technological and informational opportunities and everything depend on people themselves their mentality, their will and intellect. On the other hand, people in different countries, with different culture and in different scientific centers are able to get education in famous universities. Disabled persons can learn at schools, colleges and universities by distance. Those who study at schools, colleges and universities can enhance their knowledge using the educational literature, encyclopedia, references, dictionaries, data bases which are freely accessed, participating in distance educational courses, in collaborative projects with students from others schools, universities, countries, discussing different problems with them. So the opportunities which the Internet can offer in the sphere of education, are really unique.

Internet has brought a lot of advantages into English language teaching and learning, which differ from other tools. The power of the internet, that learners able to communicate with users out side, being able to receive not just words but sounds and pictures and being able to produce content, rather than simply receive it. David Eastment,(1999) states:

" Internet can be seen as one of "the mass media" similar to newspaper, radio and tv, but with crucial difference that it has been from the start, a digital medium where as other media are only slowly moving from analogue to digital. It is a vast storage of information, a global CD-ROM of ultimate capacity or it's communications network which use to exchange data or simply speak to each other. Teachers and learners have access to authentic and up-to-date material in easy manipulative form from an English–speaking country".

Internet has grown and spread. It becomes common in schools, institutes and universities in developed world, with number of networked, Internet connected machines to use them creatively for language teaching and learning as D. Eastment, (1999) clarifies:

" The use of Internet in all aspects of ELT has grown rapidly between 1996 and 1998 and still continues. The number of ELT sites on the web has tripled".

In 1970s and 80s access to the information was difficult until World Wide Web (WWW) has developed Eastment, (1999) states:

> " The World Wide Web offers away of using Internet resources not only a text but is able to Integrate graphic, sounds and videos… from 1996 to 1998 new software has been developed so that people can create web pages without needing to understand HTML ".

As quoted above teachers and students are publishing their own pages freely to anyone who has e-mail address. Many studies have been conducted about the relationship between technology and language. Many studies suggest that the use of the Internet is beneficial for one's English language learning. Computer connected to the Internet are therefore, regarded as effective tools.

2.1.3 The Concept of WEB-based Learning

Web-based learning is a new concept and way for enhancing English language teaching and learning. It is often called on line learning or e-learning because it includes on line course content. Discussion forums via e-mail, video conferencing, and live lectures are all possible through the web.

Generally, the meaning and the basic concept of web-based learning is one way to learn, using web-based technologies or tools in a teaching and learning process. In other words, learner uses mainly computers to Interact with the teachers, other students and learning materials. Agnes

Kukulska & John Fraxler (2005) state *" Web-based learning is both new concept and one that has some familiar connotations. It is certainly concerned with learners in sense that learners should be able to engage in educational activities without the constrains of having to do so in a delimited physical location".*

Furthermore, learning inside classroom or in various locations requires nothing more than motivation to do so where ever the opportunity arises from books, electronic resources, places and people. A. Kukulska & J. Fraxler (2005) mention

> "What is new in web-based learning comes from the possibilities opened up by portable devices that are sometimes small enough to fit in the pocket (smart phones), computers or lab top computers. These devices can be available with relative ease and used for communication and collaboration and for teaching and learning activities that are different from what is possible by traditional learning".

We are beginning to see the implement of these technologies in further and higher education, in schools, and the community. They have an impact on teaching, learning and on the connections between formal and informal learning, work and leisure (A. Kukulska & J. Fraxler .2005). The purpose of this study is to promote and develop our understanding and to stimulate educators, teachers and policy makers to these new possibilities. On the other hand, web-based learning can be formal and informal. Formal web-based learning is purposed and learning activities are organized by teachers. Informal web-based learning takes place while you are searching for materials from the Internet. It is self-based, depending on your goals and ambition to learn.

Learning through web, has a crucial in educational context, Albalawi, (2007,p.4) states:

" The integration of the web in the educational environment makes it possible for students to study from cities far away from the main campuses. Whereas some professors consider themselves technologically adventurous in putting their syllabi and class notes online, more institutions are beginning to make entire degree programs accessible online".

There are a number of reasons why web-based learning might be chosen according to Mathew & Dohery, (2000), including:

(i) Enhancing students learning

(ii) Spending more time with students working in small groups or one-on-one.

(iii) Reducing repetitive teaching tasks.

(iv) Reducing paper flow and management.
(v) Providing improved instructional material.
Poirier (2000) states:
" Most educators aim to use a teaching method that is effective, efficient and enjoyable ".
Web-based learning as a new method seems to be more effective and reliable way of learning, since learners can learn on their own pace and have good opportunities to interact with their teacher and other learners to enhance their learning, Koonce, (1998,p.1) reports:
" From web-based instruction and distance learning to virtual reality and online peer communities, training and technology are converging in rapid and radical ways. The convergence-speeded by the Internet and by the grows of company intranets and extranets is having a revolutionary impact on both the nature of training and the skills that trainers will need to do their jobs in the next country……Are you ready for what these changes will mean to you? Are you becoming an expert at this new technologies and new modalities of learning that are developing? Or is your idea of training still centered the use flip charts and stand up presentations, ice breaker exercises and extensive lecture".
On web-based learning method, students do not influence by other students' abilities or weakness, Bennett, (1996,p.31) reports:

> " Teaching to different ability background and interest has posed an eternal dilemma to educators instruction that is appropriate or beneficial to one student may have a negative effect on another. Teachers with classroom of children know it is imperial to try to tailor lessons to each student. Personal attention, however, would be immensely helpful because of the varied needs of pupils…..with computer and tutors, the learning of online, individual will never be hindered by the abilities and weakness of others. Each student will move at his or her own pace, unaffected by the rate of learning of any other students ".

2.1.3.1 Types of Web-based Learning (WBL)

Four types of web-based learning (hereinafter: WBL) have been distinguished including the following ones:
(i) Computer-based learning
(ii) Electronic performance support
(iii) Virtual asynchronous classrooms
(iv)Virtual synchronous classroom
Over the past four years one the changes in WBL has been the name. The term WBL has been replaced with a broader name *e.learning.*

A number of fundamental matters are addressed in this connection irrespective of the kind of WBL to be adopted. Moreover, there are the educational benefits which the university may get through using this innovative technology. There is also the question of challenges faced by the EFL teachers and learners when designing or choosing between the existing web-based tools. How teachers can address these challenges through the roles that they may play in web-based learning program is also essential for the conceptual framework. In the following sections, a brief overview of the learning English language vocabulary through web-based learning program and its related tools is presented and the ideas about how they can be used to benefit EFL learners are also explained.

2.1.4 Interaction and Learning

Interaction plays a crucial role in both face-to-face and online learning environments. As technologies develop, online interaction has been made possible in different forms and formats, which enable learners to interact with each other whenever and wherever they wish. Yet it must be asked, what are the types and features of online interaction in general and in an online language learning environment in particular? Which models have been used to analyze an online interaction process? These questions will be reviewed in this chapter, which is divided into three main parts.

The first part of the chapter presents key elements of online interaction in general. It starts with a review of main types of interaction: learner–content, learner–instructor, learner– learner and learner–interface. This is followed by an analysis of two popular modes of online interaction – synchronous and asynchronous – and their advantages and disadvantages. The main patterns of interaction will be briefly articulated to provide readers with the ways that interaction takes place in an online environment; for instance, who starts the discussion and how the discussion is sustained. Finally, there is a review of the factors that influence online interaction.

The second part of this chapter builds on the results of the first part with special attention to interaction for English language learning. This part starts with a review of interaction in computer assisted language learning (CALL) and related studies that have been undertaken so far. It focuses mainly on how learners' interaction with content, instructors and peers would help them enhance macro language skills: listening, speaking, reading and writing.

Finally, two models will be presented in this review of literature. The first one is the community of inquiry (COI) model developed by Garrison, Anderson and Archer (2001). This model examines the social, cognitive and teaching presence of learners and instructors as well as the relationship between these three constructs. The second model, proposed by Salmon (2003), describes different stages of learning that take place in the online interactional process: from accessing to socializing, exchanging information to constructing and developing knowledge. This review of literature is instructive because, on the one hand, it provides comprehensive information about online interaction and, on the other hand; it identifies a gap in research that justifies this study.

2.1.4.1 Interaction in Online Learning Environment

Globally, online learning has become a popular trend thanks to the rapid evolution of information and communications technology (ICT) and the internet. Nowadays, most higher education institutions around the world offer online courses for their students. (Rudestam & Schoenholtz-Read, 2010). Most recently, the development of massive open online courses (MOOCs) opens more opportunities for a larger number of learners worldwide to gain knowledge and skills flexibly without having to attend traditional classes. (Bruff, Fisher, McEwen, & Smith, 2013; McAuley, Stewart, Siemens, & Cormier, 2010). For example, as many as 30,000 students can be taught at the same time by professors from lead universities all over the world via Coursera, a social entrepreneurship company that partners with many top universities across the globe to offer free courses online for anyone to take. (Audsley, Fernando, Maxson, Robinson, & Varney, 2013). The continuous growth of online courses in both academic and financial aspects has raised many issues such as quality, design, and challenges including that of online interaction (Muilenburg & Berge, 2005; Nguyen, 2009; Song, Singleton, Hill, & Koh, 2004; Vrasidas & McIsaac, 1999).

While there still exist different views in relation to the key factors contributing to the success or failure of an online learning course, researchers and practitioners are in general agreement that interaction is essential, and forms the basis for effective practices in online learning environments. (Battalio, 2007; Beldarraina, 2006; Fulford & Zhang, 1993; Palloff & Pratt, 2007; Wise et al., 2004; Woo & Reeves, 2007).

Interaction is a complex phenomenon that entails many psychological, social, technical, linguistic and cultural dimensions, and it attracts huge attention from educators, course developers and researchers. (Juwah, 2013). The following part of the chapter presents key elements of online interaction; namely types, modes and patterns of interaction and key factors that influence the online learning process.

2.1.4.2Types of Interaction

Interaction is commonly understood as communication among individuals, but in this review of literature, it also includes learners' interaction with the content and interface of an online course. Moore (1989) identifies three types of interaction in online environments: learner–content, learner–instructor and learner–learner. Studies conducted by Hillman (1994) and Sinha, Khreisat and Sharma (2009) have identified a new dimension of interaction: learner's interaction with interface. Furthermore, Wagner (1994) indicates the difference between interaction and interactivity, which focused on features of the technology systems. In agreement with Wagner's view, other researchers proposed that it was worth taking into account the role of technologies in the interaction process. (Finegold & Cooke, 2006; Roblyer & Wiencke, 2003).

(i) Learner –Content Interaction

with content is the process in which learners exploit the materials that are embedded in the online course for their study purposes. Content delivered in an online course can be in different forms and formats, and be complete, relevant and accurate. (Marzban, 2011). The online resources include not only learning materials but also learning activities, and assignments to help learners achieve learning outcomes. (Abraham, 2008). With advanced evolution of different LMSs, the content of an online course (e.g. study materials and activities) can be structured according to pedagogical needs of the course developers. A very important but difficult aspect concerning learners' interaction with content is how to measure the quality of that interaction. (Chen, Zhang, & Liu, 2013). There have been many approaches that established standard ways with which learners' outcomes could be measured not just on the grades or surveys, but also on true attainment of knowledge. (Klimova, 2011). Indeed, the evaluation of an online course is very complex, and involves not only the value and effectiveness of online materials, but also

the efficacy of interactional tools embedded in learning management systems. (Levy & Stockwell, 2013).In developing countries, where online learning at higher education levels is still in its infancy. (Satar & Özdener, 2008). The assessment of quality of course content has not been considered seriously. The decision whether to implement an online course is sometimes based on the decision of the management board with little consultation with instructors or learners and there are concerns about the content of online courses. (Chiu, Liou, & Yeh, 2007). In this regard, Andersson and Grönlund (2009) have proposed a comprehensive conceptual framework on challenges for e-learning in developing countries, including those for individual (student and teacher), course (design, content and support), context (organizational, social and cultural) and technological barriers (p. 9). This framework could be used as a useful checklist when designing an online learning project. Another important issue concerning the course content, or rather the interaction with it, is the relationship between quantity and quality of learners' interaction with the content. Quite a few studies have been conducted on this issue. Some researchers posited that there was a positive correlation between access rates and grades. (Chen et al., 2013).

While, other researchers viewed that it was the quality that mattered, not quantity of interaction. (Garrison & Cleveland-Innes, 2005; Lee, 2012; Mowrer, 1996). In some instances, higher education institutions made interaction with content compulsory to ensure highest possible frequency of interaction. Conversely, some researchers have suggested that standard for online teaching need not contain arbitrary thresholds for required interaction. (Grandzol & Grandzol, 2010). In conclusion, interaction with content is an integral component of an online learning process. The content of an online course has to be carefully designed to ensure that learners can achieve quality outcomes, which is possible through involvement of learners in deep and meaningful learner-to-content interaction throughout the online course. (Lee, 2007). In foreign language learning, this could be realized through the application of advanced technologies that provide learners with personalized, detailed feedback for their performance of linguistic tasks; for example, doing reading or grammar exercises. Nevertheless, learners' interaction with content cannot be separated from interaction with instructors, peers and interface.

(ii) Learner –Instructor Interaction

In online learning environments, learner–instructor interaction has been found to be the most important one in guiding learners to interact with content and peers. (Kelsey & D'souza, 2004). Learners' behaviors in the online learning process depend a great deal on the quantity as well as quality of instructors' guidance and feedback. In terms of quantity of interaction, learners naturally react positively to attentive instructors. On one the side, an instructor's online presence could be an important factor to make learners satisfied with the online learning environment (Kang & Im, 2013). On the other side, studies have shown that too many posts from instructors may have an adverse impact. (Dennen, Darabi, & Smith, 2007).

In fact, Mazzolini and Maddison (2007) study shows that instructors' numerous posts did not have a positive effect in increasing the number of learners' posts. Furthermore, quantity measurement could not characterize cognitive outcomes of the learning process. (Garrison & Cleveland-Innes, 2005). Valentine (2002) and Son (2006) also observe that learners had mixed perceptions about the role of instructor in the interaction. Indeed, Huang and Nakazawa (2010) report that in a wiki environment, learners had more interaction with their peers than with the instructors. It was also claimed by some researchers that learners' involvement did not seem to depend on tutors' inputs (Ng & Murphy, 2005) and while learner–instructor interaction might bring academic benefits to learners, it needs to be sustained carefully and aligned to course goals and objectives. (Zhu, 2006).

The abovementioned issues were also discussed by other researchers, who suggested that learners were more motivated and satisfied by the instructor's high social presence. (Finegold & Cooke, 2006; Thurmond & Wambach, 2004; Wise et al., 2004).

Similarly, Swan (2001) has asserted that 'interaction with instructors seemed to have a much larger effect on satisfaction and perceived learning than interaction with peers'. Earlier, Brown and Vician (1997) also conclude in their study that the responsiveness of the instructors had influence on learners' frequency and rate of interaction, and that the instructors might need to model on the use of computer-based communication tools in the interaction process. What learners valued more from the instructors' messages seems to be the quality of the posts.

Study by Swan (2002) about factors affecting the success of asynchronous online learning suggested that the quality of learners' interaction with the instructors was more important than the quantity. Messages from the instructors should be able to lead to cognitive presence on the part of learners. By spreading messages throughout the course and careful structuring of online discussion threads, instructors might be able to engage learners in the construction of knowledge. (Zhu, 2006).Hence, in order to be successful in online teaching, an instructor has to play a more complex role compared to teaching in traditional face-to-face settings. (Baran, Correia, &Thompson, 2011; Senior, 2010). In addition to mastering competences in pedagogy and evaluation, an instructor needs to train with technological skills as well. (Ernest, Heiser, & Murphy, 2013; Hampel & Stickler, 2005; Sun, 2011). One of the most laborious tasks for online instructors is to provide feedback to learners' work, which should serve many functions like praising their efforts, suggesting corrections to be made and facilitating interaction among learners. According to Alvarez, Espasa and Guasch (2012), instructors should combine suggestions with questions or corrections when giving responses to learners' [writing] work. This requires instructors to attend to the content and structure as well as style of a piece of writing, together with technological skills to use certain applications to perform these tasks; for example, track changes. In their investigation about key competences needed in an online learning environment, Hampel and Stickler (2005) propose a seven-level pyramid that has strong focus in, among other things, an instructor's interactional competences under different names such as socialization, communicative competence and information exchange. In order to be able to acquire all skills suggested, a tutor and/or instructor needs to be trained extensively for many extra skills besides his/her professional competences. This might not be feasible in a number of contexts where instructors are already busy with their traditional face-to-face teaching load (Ke, 2010). Moreover, it will therefore be a joint effort of institution and individual that can bring online tutor training one step further from ''coping with difficulties'' to the development of a truly original online pedagogy for language teaching. (Hampel & Stickler, 2005, p. 324)

In their review of literature on the roles and competences of online teachers, Baran, Correia and Thompson (2011) address three aspects that

need further investigation. They are the empowering of online teachers, promoting critical reflection, and integrating technology into pedagogical inquiry. (p. 430). In this sense, it is important to create transformative learning experiences in which each teacher is given the power to reflect on their own online teaching practices and self-discover the necessary competences to meet the needs of online learners in different contexts and disciplines. Although it is necessary for online teachers to be trained on technological matters, it is their power to freely transform existing pedagogies to the online environment that plays a key part in creating learner-centered approaches and communities of practice among themselves (Baran et al., 2011). In the same line of study about learner–instructor interaction, other researchers (Shackelford et al., 2012) present seven types of interaction that were instrumental for the development of a sense of community (SOC). Most of these types were related to the role of instructors such as providing information on learning goals and useful, timely feedback to learners. Their studies have found that instructor modelling was the most important factor in developing a community of learning. Online learners, especially novice ones, appreciated both academic and technical support from their instructors. This view was supported by Sher (2009) who suggested that:

> The instructor must encourage students to actively participate in the course discussions; they must provide feedback on students' work and inform them of their progress periodically; and treat them as individuals. In addition, a learning environment that encourages sharing learning experiences, builds a sense of community among students, and supports teamwork is desirable. Open-ended responses showed the importance of interaction in the online learning environment. (p. 116)

(iii) Learner-Learner Interaction

The third type of online interaction is among learners themselves, which can be in one to-one or one-to-many format. Interaction with peers gives learners strong motivation to excel through mutual collaboration for learning. (Sharma, 2010). This type of interaction is one of the cornerstones for the formation of community of learning, which is instrumental in improving study outcomes, and enhancing high-order thinking and involvement. (Blake, 2009; Rourke, Anderson, Garrison, & Archer, 2007). More importantly, studies have shown that learner–learner interaction has a positive impact on learners' satisfaction and autonomy in web-based online learning environments. (Eneau & Develotte, 2012;

Swan, 2002); yet, technology and collaboration among learners have important roles in creating and maintaining online interaction.

Regarding technology for peer-to-peer interaction, web technology is used more and more extensively for learning interaction. Learners can interact with their peers in several forms: asynchronously using, for example, email or discussion boards, or synchronously using conferencing and chat facilities such as Skype ,face book and Yahoo Messenger. With the advanced development of connectivity (e.g. broadband, 3G, 4G), video communication has been made possible even while learners are on the move. (Smyth, 2011). The use of modern learning network and video for interaction is very helpful in increasing affective, cohesive, interactive immediacy and reducing feelings of isolation. (Smyth, 2011). Recently, the use of alternative social networking sites has been increasingly applied in higher education. (Wu & Marek, 2013). One of these social networking sites is Facebook. Globally, higher education institutions have made use of Facebook for teaching and learning purposes besides publishing their information and strengthening their community links broadly. For example, many universities have used Facebook to contact their learners, post announcements and respond to learners' queries. (Bosch, 2009; Manca & Ranieri, 2013). Although, the network is considered by many educators as an entertainment tool, and some studies have proved a negative correlation between the amounts of time learners spend on Facebook and their academic performance, (Claro, 2009; Gorjian, Moosavinia, Kavari, Asgari, & Hydarei, 2011). It is undeniable that learners spend a lot of time interacting with others on this social networking site (Goertler, 2009). In their study, Rod and Guerrero (2013) have also stated that learners considered Facebook as an imagined community to complement learner–learner and learner–instructor interaction. Similarly, learners in Bosch's (2009) study reported that it was useful to use Facebook to check class-related materials and have interpersonal communication. This social network site is also reported in a study by Brady et al. (2010) as advantageous in enhancing levels of communication and collaboration to deeper levels of reflection (p. 165). In short, Facebook cannot replace an LMS; whereas, it can be instrumental in connecting learners for educational purposes and facilitate learning objectives for learners.

Online learning does not only require learners to make of the most of available technologies, including CMC tools such as chat, forum and email, but also how to be flexible in the application of different learning theories. (Gillani, 2003; Levy & Stockwell, 2013). For example, according to constructivist theory, learners construct new knowledge through the presentation of their own ideas, discovery of new knowledge through active exploration of multimedia and interaction with peers within a social context. (Dalgarno, 2001; Woo & Reeves, 2007). These learning activities resemble traditional face-to-face settings; though, it requires a higher level of autonomy (for self-directed study) and certain mastery of technology to support task completion. (Levy & Stockwell, 2013). In the new environment, learners who are better at using technology may benefit more, but in terms of getting new knowledge, they still learn from experience: Some of the best examples of online learning draw their inspiration from face-to face experimental learning events and take the notion of learning from experience into new dimensions. Good examples of this include online debates and the use of simulations and role-plays for learning. (Alexander & Boud, 2001, p. 9). In the area of Call, various studies have been conducted on the application of different learning approaches such as behaviorism, sociocultural theory and constructivism. (Gillani, 2003; Levy & Stockwell, 2013). The individual learning theory provides foundation for the design, teaching and research of online courses; on the other, a combination of different theories may help to develop suitable strategies and learner autonomy, in addition to the acquisition of language competence. In the new learning context, learners are still at the center of the learning process, so it is not the new learning pedagogies that are needed: it is the application of the available technologies and existing pedagogies effectively and flexibly that would benefit the learners better. (Golonka et al., 2012; Mayes, 2001).

It is the numerous discussions among learners that define success of an online course (Alvarez et al., 2012), and it is the massive and sustained participation of learners in discussions that create and maintain a successful community of learning. This is easier said than done as observed by Sun (2011):

> With careful and skillful facilitation by the teachers, everyone would come on board, socialize, interact and collaborate, we believed. It proves,

> however, to be only wishful thinking on our part. Nevertheless, students do try. At the first few weeks, students would usually do a lot of greeting the class: writing in the class blog, posting messages addressing the whole class, using group emails, trying pairing up or grouping, organizing practice sessions and so on. However, it would soon become quiet in the third or fourth weeks when most of them would have paired up or teamed up. They would start disappearing from the community. (p. 437)

Among the three types of interaction mentioned above, which one is the most important? This issue has been studied by a few researchers (Dodigovic, 2007; Swain, Brooks, & Tocalli-Beller, 2002) but little consensus has been reached (Chen, Lambert, & Guidry, 2010). More recently, some researchers have tried to find correlation between learner-to-learner and learner-to-instructor with such dependent variables as learners' satisfaction with the online course (Sher, 2009) and course completion rate. (Grandzol & Grandzol, 2010). In Grandzol's (2010) study while learner–learner interaction was significantly associated with course completion rate, learner–instructor interaction was not. But in Sher's (2009) study both learner–instructor and learner–learner interactions were positively associated with learners' satisfaction. Although these two studies used two different dependent variables, they partially implied that it is difficult and probably impractical to search for conclusive answers to the question about the relative importance of each type of interaction. There are many other factors such as compulsory/voluntary interaction, technology, implementation and system quality that would contribute to the success or failure of an online learning course. (Gulati, 2008; Satar & Özdener, 2008; Shackelford et al., 2012; Stepich & Ertmer, 2003).

(iv) Learner-Learner Interface Interaction

Learners' interaction with peers, instructors and especially with content cannot be successful without a decent experience of using the technologies that enable the above interactions to take place. While some of the communication technologies are easy to use (e.g. email, text message and forum), others are not. Thus learners' familiarity with the interface – the point or means of their interactions with peers, instructors, course content and e-learning system – is important. (Hillman, 1994; Keramati, Afshari-Mofrad, & Kamrani, 2011). In the same line of argument, Sun and Hsu (2013) have posited that interface provides learners with a scenario to engage in learning activities. Earlier, Dillon

and Zhu (1997) state that interface and human factors are the ones that could ensure efficiency and effectiveness of interaction with computers in web-based instruction (WBI). Some researchers use the term 'usability' to describe this human–computer interaction which is a quality or attribute that represents the ease of use of computer interfaces. (Yoon, Laffey, & Oh, 2008).

An interactive learning environment is one of the crucial factors that make learners satisfied with an online course, together with their self-efficacy; that is, confidence in performing specific online tasks. (Liaw & Huang, 2013; Liaw, Huang, & Chen, 2007; Sharma, Dick, Chin, & Land, 2007). An interactive learning environment provides learners with a wide range of information in forms of digital texts, animations, audio and video clips as well as direction on how to use these learning resources. (Havice, Davis, Foxx, & Havice, 2010; Kramarski & Gutman, 2006; Wong & Kamariah, 2009). One of the important characteristics of an interactive learning environment is its user-friendly interface, which includes such elements as ease of use and operational stability. (Shee & Wang, 2008). In short, the interface (e.g. homepage and system functions) of an online course should be as easy to use for learners so that they can perform different communication activities by using email, chat forum and/or exploration activities through searching information and content inside and outside the online course.

2.1.4.3 Modes of Interaction

In a Web-based learning (WBL) or in an online environment, learners interact with peers and instructors through two main modes: synchronous (at the same time) and asynchronous (not at the same time). Each mode of interaction has its own advantages and disadvantages. The following part presents the studies that have been conducted to date about these two modes of interaction.

a . Asynchronous Interaction

Asynchronous interaction is "a text-based human-to-human communication via computer networks that provides a platform for the participants to interact with one another to exchange ideas, insights and personal experiences." (Hew & Cheung, 2003, p. 249). Currently, asynchronous interaction is the dominant mode of communication in educational CMC (Toetenel, 2013). The most commonly used technologies for asynchronous learning are email, collaborative learning

forums, e-board, application sharing, simulation or virtual laboratory, online library/learning access, real-time test and evaluation, and video and audio streaming. This mode of interaction offers numerous advantages for learners to interact with peers, instructors and content. Adding, Studies have shown that asynchronous interaction is a good environment for less confident and shy learners. (Bassett, 2011). The mode leaves more time for learners to reflect and develop ideas. (Hourigan & Murray, 2010). The participants in studies on asynchronous interaction have expressed others advantages such as convenience, positive experience and effectiveness. (Finegold & Cooke, 2006; Gibby, 2007; Song et al., 2004; Yang & Wu, 2011). The design of asynchronous learning enables learners to develop both cognitive and performance skills and to apply more strategies in formulating questions (AbuSeileek & Qatawneh, 2013; Bowles, 2004).

Asynchronous interaction is not without disadvantages. The threaded asynchronous discussions tend to make learners focus more on the most recent posts (listed at the top of the forums) than posts with important content. (Gao et al., 2013). The hierarchical structure of threaded forums also makes it difficult for instructors to promote interactive dialogues. Learners may also feel disconnected from online discussions because of the wait time between posts. (Andresen, 2009). Synthesizing ideas from threaded forums is also a hard job for the instructors and learners who are assigned to moderate the discussions. (Gao et al., 2013).

b. Synchronous Interaction

Synchronous interaction means real-time communication between learners and instructors or among the learners themselves in the online environment, mostly in the form of text chat. (Budiardi & Anggraeni, 2013). With the development of advanced communication technologies, synchronous communication also includes more sophisticated forms such as virtual classrooms, videoconferencing and shared interactive whiteboards. Supporters of this interaction mode claim that it contributed to continuity and convenience with passionate discussion and high levels of social presence. (Elola & Oskoz, 2010; Schwier & Balbar, 2002). Other studies that are conducted on synchronous interaction also reported a number of disadvantages of this mode; for instance, rigidity and inefficiency. (Pan & Sullivan, 2005), learners' nervousness (Wang & Reeves, 2007), different time zones, individual schedule and technical

breakdown (Ernest et al., 2013; Sun, 2011). Another drawback is that learners need to have access to fast, reliable networks and sophisticated computing technologies. (Bowles, 2004). Thus, synchronous e-learning may sound cost effective in terms of reducing the need to have physical classrooms, but the investment costs to set up state-of-the-art technologies might even be higher. In addition, human capital investments are also needed to use the facilities. In short, although a synchronous online environment may provide a good learning experience, it cannot be used for all subjects nor can it substitute for face-to-face study. (Wang & Reeves, 2007).

In conclusion, each of the mentioned modes of the interaction has proven to contain certain advantages and disadvantages. While synchronous interaction has been able to cater for urgent needs of learners and instructors, its cost and unreliable internet connections may hinder the interaction process. Asynchronous interaction can be realized at a low cost and in a more flexible manner. This mode also helps learners and instructors gain deeper knowledge because of the available time for them to read, think and provide feedback to others' posts. Nonetheless, the threaded design of most asynchronous discussion forums may make learners lose focus of their discussion and thus cannot ensure quality of information exchange. Therefore, a combination of both asynchronous and synchronous modes of interaction, together with occasional face-to-face sessions, would be able to cater for the diversified needs of learners as well as motivate their participation in online learning. (Oztok et al., 2012). More recently, Gao et al. (2013) propose multifunctional environments for interaction that would enable participants to achieve learning goals.

2.1.4.4. **Pattern of Interaction**

Another important issue concerning online interaction is patterns of interaction. In online learning, how do learners and instructors interact with each other? Who starts the interaction process? How do participants maintain interaction throughout the course? These are some of the questions that draw attention from many researchers. For example, in their studies, Pawan, Paulus, Yalcin and Chang (2003), and Yang and Wu (2011) examine how learners initiated, led or maintained interaction threads. They discovered that learners went through different stages of

learning: information acquisition, negotiation of meaning and information contribution. This collaboration process would lead to knowledge building, which was reflected by the presence of high-level thinking stages in various interaction models (LaPointe & Gunawardena, 2004; Lee, 2012; Salmon, 2003). Earlier, Howell-Richardson and Mellar (1996) explore the dynamics of learners' interaction in two computer-mediated communication courses, and reported that learners varied their message length, distribution and links in their interactional acts.

This result was echoed by Fahy Crawford and Ally (2001) although these researchers look at the density and intensity of interactions. Later studies by other researchers. (Lally, Lipponen, Simons, & de Laat, 2007; Lee, 2012; Zhu, 2006) continued to explore various patterns of interaction between learners and peers, and learners and instructors, as well as learners with content. Like earlier studies, they found a big variation of interaction types: star type of network interaction and interconnected web, as well as different levels of engagement in the beginning, middle and final phases of a study course. For example, in Lee's (2012) study, participants' posts increased sharply on the due date. It was also observed in Sun's study (2011) that after the socializing phase, the interaction tended to be in form of one to-one (learner–instructor, learner–learner) or in small group. In this pattern of interaction, the instructor is the one who initially prompts the interaction process by raising an issue for discussion, engaging learners. The model shows that learners took part in the discussion but without a clear structure. One of the concerns was that learners did not build upon ideas that have been suggested by others. Another concern was that learners and instructors mostly have one-way interaction during the communication process. The above concerns were also reported by Lee (2012), who then suggested that "the instructor could assign students diverse roles such as summarizer, initiator, or opponent regarding encouraging their participation and prevent lurking" (p.269). One of the reasons for one-way interaction in asynchronous communication forums is that posts (both from learners and instructors) may not contain words and phrases that call for comments from others, or that the discussion topic(s) were not controversial. It has been reported in a study by Zingaro and Oztok (2012) that notes (posts) with questions often receive more replies from peers. Another reason is that learners

may spend most of their time reading other learners' messages without expressing their own opinions.

When they do, the connection between their opinions and those of the earlier learners is rather weak. In other words, instead of commenting on peers' opinions, learners just express their own. Lamy and Goodfellow (1999) called this 'monologue', the term used to indicate that learners only post their piece of writing without inviting or receiving any comments from peers. They shared their experiences or opinions but did not connect to others' contributions. (Garrison & Cleveland-Innes, 2005). The patterns of interaction among language learners seem to share the above features. Study by Choo, Kaur, Fook and Yong (2013) reveal that learners differed in their levels of interaction with one another during the interaction process, but most of the interactions occurred in the sharing of information. These were phase Lowe and Anderson's (1997) Interaction Analysis Model. There was little evidence of applying newly constructed meaning (Choo et al., 2013).

In short, studies on patterns of online interaction revealed that learners displayed different behaviors when communicating with others. While some are very active in both reading and responding to others' messages, still others prefer reading only with little participation. Both learners and instructors can be the ones who initiate the discussion process, and interaction among communicators occurs in different formats. Unfortunately, interaction is mostly one-way because learners tend to express their opinions without connecting to what has been posted by peers. Thus instructors have a very important role in making sure that the discussion is on track and learners play different roles in the discussion process so that interaction can result in in-depth knowledge building. (Lee, 2012; Sing & Khine, 2006).

2.1.4.5 **Purpose of Interaction**

Studies have shown that learners had different purposes in mind when interacting with their peers and instructors. Their purposes could be classified into different groups, some of which were very general; for example, providing information, asking questions (Islam, 2003; Son, 2006), giving feedback (Lisa, 2011), gaining attention (Hirumi, 2002) or responding to learner's opinions (Dennen et al., 2007). Others were more specific to foreign language learning; for instance, helping with grammar points, the assignments or course infrastructure (Gibby, 2007). Some researchers classified the computer-mediated conversations into five

focus group areas: article, content, technical, non-academic or procedural (Poole, 2001; Thomas, 1996). According to Poole (2001, p. 169) 'article' messages were those that included the content of a reading task while the 'content' posts were also related to the course readings but indirectly elicited. In other words, the 'content' posts are the follow-up discussions of the reading or the topic of the week/lesson. The 'technical' and 'procedural' messages contained information about the use of the course website and requirements respectively. Finally, the 'non-academic' messages were those that did not directly relate to the class such as personal messages among the students to greet one another.

2.1.4.6 **Factors influencing online interaction**

Review of the literature in online learning has revealed that there are many factors that influence learners' interaction with the course content, peers and instructors (Bolliger & Wasilik, 2009; Lee, 2006; York & Richardson, 2012). The past studies have looked into many different aspects of influencing factors. While some researchers have investigated the barriers to distance education in general and online learning in particular (Bhuasiri, Xaymoungkhoun, Zo, Rho, & Ciganek, 2012; Muilenburg & Berge, 2005; Song et al., 2004), others focus their attention on the enabling factors that influence learner's interaction with the course content, peers and instructors. (Conaway, Easton, & Schmidt, 2005; Nguyen, 2009; Nisbet, 2004; Vrasidas & McIsaac, 1999; Yukselturk, 2010). These factors may be broken down into smaller criteria or elements such as the satisfaction, attitude and competence for the human factors (learners and instructors) as well as the user-friendliness of the interface, and ease of access for the non-human factor (technology). The following sections present an overview of the influencing factors that are related to the learner, instructor and online course. Learner-related factors: Learners have always been the key subject of studies about influencing factors of online interaction. More specifically, researchers have been studying the impact of learners' demographics (e.g. age, gender and prior internet experience) on their online learning outcomes or satisfaction (Kim, Kwon, & Cho, 2011; Liaw & Huang, 2013; McSporran & Young, 2001; Yukselturk, 2010; Yukselturk & Bulut, 2007). The results of these studies have been inconclusive. For instance, while Yukselturk's (2010) study concluded that there were significant relationships between learners' gender and their level of participation in discussion forums. While, the study by Kim, Kwon and Cho (2011) stated that demographic variables were not related

to course satisfaction. Similarly, while some researchers (Chang et al., 2013; Chen, 2014b; Liang & Wu, 2010; Sun, Tsai, Finger, Chen, & Yeh, 2008) claimed that learners' technical prior experience or computer/internet self-efficacy was significantly associated with course satisfaction and confidence, studies by Kuo, Walker and Schroder (2013) and Lee (2006) have suggested that computer and internet self-efficacy was not a significant predictor of learners' satisfaction or perceived usefulness of an online course. The different results, sometimes by the same researcher as in the case of studies by Kuo et al. (2013), were partly due to the differences in participants involved in the studies. Other learner-related factors were learners' availability of time, their self-regulated learning capabilities, attitudes towards e-learning and language proficiency (Bhuasiri et al., 2012; Chen, 2014b; Compton, 2009; Kuo, Walker, Schroder, et al., 2013; Liaw et al., 2007; Yukselturk & Bulut, 2007).

2.1.4.6.1. Instructor-factor related

Instructors also have critical influence on the success of an online course. Their understanding about, commitment to, and attitudes about online learning are some of the key factors relating to the instructors (Palloff & Pratt, 2011).Also, their timely response and feedback to learners' queries, for example, has been considered one of the most important factors (Alvarez et al., 2012; Sheridan & Kelly, 2010; Sun et al., 2008; Vrasidas & McIsaac, 1999). In the language interaction process, feedback is an important element, which occurs when instructors react to learners' linguistic problems (Gass & Mackey, 2006).

Unfortunately, it has been proven in the literature that instructors cannot always provide timely feedback to their learners' queries due to time and workload constraints (Brace-Govan, 2003; Hara & Kling, 2001; Hirumi, 2002; Vrasidas & McIsaac, 1999). Other instructor-related factors include the ability to shift pedagogy (from traditional to online teaching, and most importantly from teacher-centered to learner-centered), clear communication of course goals and teaching presence (Kang & Im, 2013; Sheridan &Kelly, 2010; Sun et al., 2008). It was suggested by a few researchers that it was critically important to provide online instructors with a comprehensive set of skills that would cover technical, social and pedagogical competences (Hampel & Stickler, 2005; Sun, 2011).The above mentioned competences are crucial for instructors because of a number of reasons. Technically, most higher education

institutions nowadays offer online courses partially or fully, which demands instructors acquire necessary technological skills to provide guidance to learners. The technical advances have also brought about social changes on the parts of learners in their interaction with peers and instructors through the use of the internet, email, blogs, social networks and other communication tools (Beetham & Sharpe, 2013). The instructors may opt to use technological advances to interact with their learners or not, but in order to engage with learners, these technical and social competences should not be ignored. Because, technology recently facilitates linking learners to their teachers and on the other way around teachers with their learners actively.

What is more important for instructors would be the shift of pedagogy in order to engage the learners in online learning (Keengwe & Kidd, 2010). For example, instructors need to know, besides their own technological competences and available facilities for online teaching and learning, how to move from traditional teaching to online coaching and mentoring, from onsite face-to-face meeting to online asynchronous meetings. Unlike in face-to-face teaching, where the lecturers can adapt to different learners through pedagogical activities like repeating instructions, reassigning activities and rearranging groups, in an online environment all these activities have to be forethought and explicitly presented so learners are certain of what they are supposed do (Beetham & Sharpe, 2013).In addition, online learning is also more flexible in terms of time, location, how resources are used and even when assessment is taken. So instructors need to be adapted to those things as well (Boettcher& Conrad, 2010). In the same line of argument, Nelson (2008) claimed:

> "Without the internet, the teacher is in charge of collecting the materials, disseminating information, controlling the discussion, and watching over the eventual end product. When the internet comes into play there are times when the teacher is asked to step aside and become an intellectual guide of facilitator. Students access information, collect their own material, have side discussions and connections, and watch over their eventual end product. In this sense, it is important for teachers to shift their thinking as they bring the Internet into their lesson-designing strategies". (p. 1)

Dakich (2008) also highlights the important factor of the instructor in choosing and designing suitable pedagogical strategies and practices to meet the diversity of learners' needs. In e-learning, the design element (e.g. preparing and planning a lesson) has to be carefully forethought,

obvious and pressing, which involves reflection, negotiation and adaptation of what has traditionally been a private and tacit area of work (Beetham & Sharpe, 2013). In short, online instructors should actively prepare themselves technically, socially and pedagogically when embarking into the field of online teaching.Course-related factors: The third important set of factors that influences online interaction is related to the online course itself. These factors included such elements as course content, design and technology or course quality as a whole. Studies have shown that there was an association between learners' interaction with the course content and their learning outcomes and grades (Murray, Pérez, Geist, Hedrick, & Steinbach, 2012; Zimmerman, 2012). In this regard, Sun, Tsai, Finger, Chen and Yeh (2008) claimed that course quality "is the most important concern in this e-learning environment" (p. 1196)

In order to have a quality online course, it is important for computer experts and content teachers to work collaboratively so as the course is well designed technologically and academically to ensure learners' and instructors' satisfactions. Similarly, a study by Kuo et al. (2013) has suggested that: "the design of online content may be the most important contributor to learner satisfaction" (p. 30).The course-related factors also cover other issues such as how the course is implemented and under what context, with or without support from institution management (Garrison, 2011; Khan, 2005; Lim, Lee, & Nam, 2007). In short, course-related factors play an equally important role in the quality of online learning. Quality is a complex issue and carries different meanings to different stakeholders (Bigalke & Neubauer, 2009). In online learning, quality of interaction refers to content based messages of different purposes like constructive feedback, correction, information provision and Socratic questions (for higher-order thinking skills), which altogether require certain actions from the part of the receivers (Blignaut & Trollip, 2003). Literature has shown that there are different ways to measure learners' quality interaction in on online course. For example, learners' messages can be analyzed to see if learners can reach later stages of interaction: information exchange, knowledge construction and development (Salmon, 2003).

Alternatively, learners' interaction can also be evaluated by using such tools as discussion analysis tools, rubrics, reflective self-assessment and team assessment (Conrad & Donaldson, 2011; Jeong, 2003).Although quality of interaction is an important factor in online learning, it has not been widely studied in the literature. Indeed, this is a complicated

pedagogical matter (Picciano, 2002). While participants in some research on this issue have claimed that there was a positive link between learners' frequency of interaction and quality of their performance (Curtis & Lawson, 2001; Picciano, 2002), study by Conaway, Easton and Schmidt (2005) has suggested the opposite. They argued that learner–content interaction did not correlate positively with learning outcomes. Meaningful interaction depends on many factors, such as instructional strategies, number and nature of learners, design of the course, facilitation and direction (Garrison & Cleveland-Innes, 2005; Hirumi, 2002). In conclusion, many of the relevant factors that influence interaction in an online course are mentioned relatively in this section. These factors are related to both human and non-human aspects of online learning, including learners, instructors and the online course itself.

2.1.5 Interaction in an Online English Language Learning Environment

In the area of language teaching and learning, the invention and development of computers created a new way that language could be taught and learnt. Over the past 50 years, there have been many developments in the application of Call approaches both in terms of hardware (from mainframe to handheld devices) and pedagogies (from behavioristic to communicative and integrative theories) (Jarvis, 2013). With regards to interaction in Call, there have been numerous changes as well. In the early stage, there was mostly interaction between learner and the computer that contained the language materials, exercises in the forms of diskettes, then CDs and DVDs (Wang & Vasquez, 2012). There was almost none or very little interaction between learners and instructors or among learners who used the same course or materials. It was not until the rapid development of the internet that human-to-human interaction was incorporated in CALL to enhance learning outcomes; hence, the application of computer-mediated communication or "communication that takes place between human beings via the instrumentality of computers" (Yukselturk, 2010, p. 1). The following section is divided into three subheadings: learner–content, learner–instructor and learner–learner interactions in language learning.

2.1.5.1 Learner-content interaction

Since the beginning of CALL, attention has been paid to the development of materials embedded in an online course to foster learners' macro language skills (listening, speaking, reading and writing) and language areas (e.g. grammar and pronunciation). With the participation of both computer experts and language educators, online language courses have been able to provide learners with various activities or exercise types such as multiple choice, matching, point-and-click, or simple form filling. Most of the exercises are designed with task-based instruction which is conducive to second language learning (Bolliger & Wasilik, 2009). The underlying theoretical perspectives for these CMC instructions include the Interaction Hypothesis (Long, 2006), Sociocultural Perspective by Vygotskiĭ (1978), Output Hypothesis (Kuo, Walker, Belland, et al., 2013).

Cognitive Perspective (Liang & Wu, 2010), and Constructivism (Kim, 2001). One of the key concerns regarding the application of theories for CALL was that different researchers have used different theories to interpret similar data (Blake, 2011; Levy & Stockwell, 2013). For example, an interactionist approach has been utilized by various researchers to analyze language learners' exchanges of information, including the use of videoconferencing, for the negotiation of meaning in the language learning process (Fernández-García & Martinez-Arbelaiz, 2002; Yanguas, 2010). Conversely, sociocultural theory, which emphasizes social collaboration for language development with a focus on comprehensible outputs, has been utilized by other researchers to analyze online interactions among learners (Darhower, 2002, 2007; Wang & Vasquez, 2012).A few studies have been conducted on the use of computer to teach specific macro language skills. As for reading, empirical studies have claimed that technology enhances learners' comprehension of inputs (Taylor, 2009). Similarly, Marzban's (2011) study on how CALL helps Iranian learners of English enhance their reading skills showed that learners who were taught by CALL could significantly perform better than those who were taught through traditional teacher-centered approach. Another study by Lan, Sung and Chang (2007) suggested that learners' reading skills could be improved through the use of mobile devices.

Comparably, Murphy (2010) and Hsieh and Ji (2013) revealed that learners could build up their reading skills and that their reading

comprehension could be promoted via computer-mediated feedback. Although these studies and many others have reported the benefits of using computers to improve learners' reading skills, there are still numerous issues that need further investigation, such as the role of affective variables (interest, motivation and reading purpose) in online reading, and the use of multimedia such as video games, films and emerging technologies (Abraham, 2008; Shawback & Terhune, 2002).

Regarding listening skills, computers allow storage of both video and audio files for learners to listen and do accompanying tasks. That is to say, the learners have a variety of choices to listen/watch with or without looking at the subtitle or transcript, and to get instant feedback from the computer for their performance. With additional functions such as faster and slower buttons, learners can be in full control of doing the tasks based on their level of listening proficiency.

The use of computer and web technology has been proven to make learners' listening comprehension more effective and efficient. (Roussel, 2011). Studies by Brett (1997), Klassen and Milton (1999), Fotos and Browne (2004) and Lee (2007) have revealed that learners' ability to understand oral messages is greatly enhanced with computer-based and web-based listening activities. Additionally, learners can download audio files and store them in their portable devices such as MP3 players or smartphones and practice listening whenever and wherever they wish. (Bryan & Hegelheimer, 2007).

One of the contributing factors for the better aural skills was attributed to learners' application of different strategies while doing the listening tasks. (Roussel, 2011). These strategies can be trained to learners of different levels (beginner, intermediate, advanced) so they are in full control of doing the listening tasks most effectively and efficiently. At the same time, there are many other factors that may either promote or hinder learners' use of web-based materials to develop their listening skills. These include their motivation and proficiency in using technology for language learning. Such as avoiding to waste time, especially while traveling or relaxing some learners prefer to learn few words and practice them over and over in their leisure time.

When learners are motivated, they tend to apply different strategies to make to most of available materials on the web; whereas their proficiency in technology has profound impact on their anxiety, and listening output accordingly (Chen et al., 2013). Writing is one of the productive skills

that has been taught online through various means. There are completely online courses that offer learners the key aspects of writing conventions ranging from grammar and word usage to the process of writing an academic essay (Klimova, 2011). The nature of the skills needs tangible input from the learners themselves (as authors) as well as feedback from peers and others (as readers), so the use of wikis and blogs have been extensively applied (Ducate & Lomicka, 2008; Gass & Mackey, 2006; Lee, 2010b; Taki & Fardafshari, 2012). The application of advanced technology has also made immediate corrective and targeted feedback possible (Dodigovic, 2007) and learners' frequency of editing their own written works increases (Yoon, 2008).

One of the challenges to effectively teach writing online is for the instructors to migrate from onsite or face-to-face classrooms to an online environment (Warnock, 2009). On the one hand, the migration should be able to help learners achieve as good learning outcomes as in traditional settings. On the other, it should not create too much burden for the instructors, especially in marking learners' pieces of writing. The instructors might use different pedagogical strategies in providing comments to learners' written work, one of which was corrective feedback. However, study by Loewen and Erlam (2006) showed that there was not significant learning as a result of online corrective feedback from instructors. Similarly, the results of the study by Dekhinet (2008) has shown that there are many problems associated with providing corrective feedback to learners. In this regard, Gibby (2007) stated that instructors need to explain the learners' mistakes when giving feedback to their written work. In addition, learners themselves should perform self- and/or peer evaluation of their work before sending it to instructors for suggestive feedback (Guasch, Espasa, Alvarez, & Kirschner, 2013).

Productive skill in language learning, speaking skills, has also been made possible in online courses. It has been claimed in the literature that with technology, learners can improve their pronunciation proficiency and speaking skills accordingly (Carey, 2004; Chiu et al., 2007; Hardison, 2004; Tanner & Landon, 2009). Because, technology has no deficiency in repetition, this gives a scope to the learner to listen once more when desired for practicing better pronunciation.

The use of automatic speech recognition (ASR) technology enables online learners to engage in speaking practice. More specifically, learners can listen to sample words or sentences and repeat them. This kind of

pronunciation training is often more valued by beginning learners than by intermediate or advanced ones who need other aspects of oral skills, for example communication strategies, public speaking competencies, and so on (Chiu et al., 2007; Harrington & Levy, 2001). From this view, a learner can practice his pronunciation without a teacher, which means creating an opportunity for developing language skills faster than in face to face interaction.

The state-of-the art ASR technology can give the learners feedback by telling them scores of their performance, as seen in the following example. There are two main issues with current ASR technology. Firstly, some speech recognizers have low level of accuracy; that is, they do not correctly evaluate learners' oral performance because of hardware or software issues (Carey, 2004; Chiu et al., 2007). Secondly, qualitative feedback cannot be provided to learners about their performance. It is not possible for the computer to tell the learners specifically which word(s) they mispronounce, or if they have problems with word and sentence stress. Thus qualitative input from the instructors or peers is still needed. Despite these concerns, online speaking practice has a number of advantages over the face-to-face mode. For example, learners can practice at ease without being afraid of 'losing face' It is also a great environment for those who rarely have opportunities to interact with native speakers of the language they are studying. To date, most researchers claim that the application of ASR technology yields positive attitudes from learners. Another positive aspect of online oral skills is learners' ability to use spoken language appropriately in different communication contexts. Study by Chiu, Liou and Yeh (2007) revealed that online branching practice could be designed to help learners enhance their ability to use appropriate speech acts in different contexts, though this type of practice did not help improve learners' clarity of their speech.

In an effort to provide learners with more personalized guidance for their interaction with content, linguistic and computer experts have collaborated to develop intelligent computer assisted language learning, or CALL (Segler, 2007). This advanced system explores the use of natural language processing (NLP) technology to analyze learners' input and individualize their learning accordingly (Amaral & Meurers, 2011). Numerous CALL systems have been developed for the teaching of such languages as English, Japanese, French, German and a few others (Amaral & Meurers, 2011; Gamper & Knapp, 2002). As mentioned earlier, feedback is crucial for effective language learning. The more

detailed the feedback, the deeper knowledge about language a learner can acquire. In CALL, three main approaches of feedback can be embedded in the system: pattern matching-based approach, statistical-based approach, and rule-based approach (Shaalan, 2005).

Each of these approaches has its advantages and disadvantages but it was commonly accepted that the rule-based approach can perform detailed analysis for both well-formed and ill-formed answers (Amaral & Meurers, 2011; Shaalan, 2005). The rule based approach not only appreciates learners' correct answers but also gives more detailed explanation of learners' wrong answers so they can learn from their errors. Hence, learners can acquire more linguistic knowledge during their reading, grammar or vocabulary exercises. Recently, the massive open and online course (MOOC) and open education resource (OER) movements have offered freely accessible online resources for learners of all disciplines, including languages (Audsley et al., 2013; McAuley et al., 2010). There are many advantages of using open and online resources, some of which include accessibility, flexibility and the encouragement of self-paced learning (Bruff et al., 2013). In addition, Salmon (2011) has suggested that the use of open resources could avoid high expenditure by educational institutions on content development and copyright.

In Sudan, lecturers and students can also make use of many free and open resources. For example, there are a vast number of ICT tools for language teachers and learners to teach and learn macro skills in areas such as YouTube, Teacher Tube and face book. Therefore, there is still a hope and chance for those learners who wish to learn outside of the class and independently or with the support of a teacher from an online course.

2.1.5.2 Learner-Instructor Interaction

According to Yang (2011), "a key element in successful language learning through CMC is to engage learners in learner–instructor interactions for online learning activities" (p. 3). However, there is a shortage in the literature, especially on issues like how learners of second/foreign languages use online interaction with instructors to enhance their language competence, which mode of interaction is more effective, or in what language (native or target) they should use in the course of interaction.

Language learners interact with their instructors through instant messages, emails, forums, blogs, wikis, social network sites and

videoconferencing (Goertler, 2009; Sharma, 2010). The interaction can be synchronous if learners and instructors are not barred by time zone and academic calendar (Wu & Marek, 2013). Interaction can also be asynchronous because learners, especially beginning ones, may need more time to think and write to their instructors in the target language (Chen et al., 2010). It is evidenced from past studies on CMC-based interaction that developing instructors' skills to support language learners' interaction with content and learner–learner interaction is critical (Ernest et al., 2013; Yang, 2011).

Unlike in physical environments, learners' online interaction with their instructors is hindered by various factors, some of which are beyond their control; for example, instructor's availability of time, interaction preference and their belief in the contribution of online interaction for language learning. What language learners expect the most from their instructors would be feedback, especially prompt, specific and constructive feedback to learners' oral or written works (Alvarez et al., 2012; Graham, Cagiltay, Lim, Craner, & Duffy, 2001; Lee, Srinivasan, Trail, Lewis, & Lopez, 2011).

Effective online instructors are the ones who know how to organize for the learning to happen, and to create a dynamic learning community in which the learning occurs autonomously. Successful online instructors should thus connect their learners, especially with native speakers or excellent speakers of the language they are studying, so as to increase learners' motivation in learning languages online (Wu et al., 2011). In this context, the language instructors face many challenges, not just in pedagogical shift (from traditional to online) but also technical, psychological and online facilitating skills in order to promote meaningful interaction between the learners with content and peers (Compton, 2009; Ernest et al., 2013; Sun, 2011).

2.1.5.3 Learner–Learner Interaction

Current language theory places a high level of importance on learners' interaction with peers in order to construct new knowledge. Learners' collaboration with peers to solve linguistic problems is of particular importance in the process of learning a second language (Swain et al., 2002). The sociocultural theory (Vygotskiĭ, 1978) has stated that learning occurs between people (interpersonal level) first and then within a person

(intrapersonal level) through the Zone of Proximal Development (ZPD). In the interaction process using a second language, learners use different approaches to make themselves understood through producing comprehensible output and trying to understand input presented by peers (Krashen, 1985). This continuous exchange of information is instrumental to cognitive development for both novice and experienced learners (Zeng & Takatsuka, 2009).Learners' interaction with peers can be realized through different technological means (email, Skype), in different modes (synchronous and asynchronous) and in different formats (text-based or voice chat). Studies have shown that there are many benefits for learners to take part in online language interaction, especially for shy ones who find face-to-face interaction a big challenge (Wu & Liu, 2012; Wu & Marek, 2013; Wu et al., 2011). Some of those benefits include increased confidence, motivation and ability for learners to communicate with peers, especially with native speakers of the target language they are studying.

The use of social network sites for peer-to-peer interaction has also been studied by a few researchers (Budiardi & Anggraeni, 2013; Harrison & Thomas, 2009; Kabilan, Ahmad, & Abidin, 2010; Toetenel, 2013).

These studies seemed to suggest that through casual chats with their friends on social networks, learners could learn new words, and have higher confidence and motivation. This can be an innovative way for learners to gain skills and knowledge in the language they are studying. Besides, it pushes a learner to search for the meaning of the words that he/she does not know them or are new to him/her. Here at this point language develops faster than learning on text books for language.

Besides enjoying general benefits through interaction with peers, learners can also have their macro language skills enhanced. For example, a study by Blake (2009) concluded that through text-based chats, learners had higher gains in oral fluency as compared to those who had face-to-face interaction or who did not have interaction with peers or instructors at all. One of the reasons for their better performance. (measured by speaking rate, phonation time ratio, articulation rate, mean length of run and average length of pause) was that participants of the online chat group could produce sentences simultaneously whereas those in face-to- face mode had to take turns to produce sentences. Although participants in Blake's (2009) study used text-based chats (written medium), it was

suggested in Level it's (1993) model of language production that learners of a second language go through similar cognitive processes of formulating outputs regardless of the medium: oral, written or even signed.

This was confirmed in the study by Satar and Ozdener (2008) that there was significant increase in speaking proficiency for both groups of participants who experimented with voice chat and text-based chats. The results of Satar and Ozdener's study rejected the hypothesis that text-based chat could not lead to similar speaking proficiency levels as voice chat because of the transfer of skills from written to spoken language involved (Satar & Özdener, 2008).

Learners' interaction with peers benefits them the most in writing skills. This is realized through taking part in collaborative writing process using advances in Web 2.0 technologies, mostly wikis, blogs and social networks (Budiardi & Anggraeni, 2013; Elola & Oskoz, 2010; Hourigan & Murray, 2010). Study by Elola and Oskoz (2010) showed that when working collaboratively to produce an essay using wikis or chats, learners' overall quality of the essay is enhanced. There was a constant self-reflection process of written work, especially on grammar, because learners were aware of the fact that their piece of writing was going to be read by others.

When working collaboratively, learners could enrich content and improve structure of their joint essays (Elola & Oskoz, 2010).

In the study by Armstrong and Retterer (2008), learners produced significant amounts of assignments on both personal and community blogs. This was made possible due to the fun and motivating nature of blog writing as well as the fact that learners' assignments were not graded. Although study by Armstrong and Retterer (2008) did not conclude that the more learners wrote in the blogs the better their language performance was, it was possible to say that active participants did have some improvements in the accuracy of verb tense and aspect.

This claim has been confirmed in other similar empirical studies (Ducate & Lomicka, 2008; Lee, 2010b; Raith, 2009). The above studies did not mention in detail how learners' correction of their peers' messages was made, and how learners valued the correction. Another unanswered question was how learners viewed the roles of instructors in this collaboration process. Thus more empirical studies are needed based on

different online learning models. The following part of the chapter gives a brief overview of two models that have often been used in research in online learning in general and online interaction in particular.

2.1.6 Community of Inquiry model in online interaction

In the recent century, with the rapid development of technology and communication, technology has created a new brand learning interaction for learners based on the online methods. In their contribution, Garrison, Anderson and Archer (1999) suggest a model to measure outcomes of the learner and instructor participation in an online course. To date this Community of Inquiry (COI) model has served as the theoretical framework for many studies in online learning (Rourke & Kanuka, 2009). The framework consists of three key elements; namely social, cognitive and teaching presences.

2.1.6.a. Social Presence

Social presence is addressed Garrison et al. (1999) as "the ability of participants to project their personal characteristics into the community, there by presenting themselves to the other participants as real people" (p. 94). According to social presence theory,"social presence is the feeling that other actors are jointly involved in communicative interaction" (Walther, 1992, p. 53). In his study, Kehrwald (2008) stated that social presence is synonymous with quality of people, and "it is people who make online learning environment productive" (p. 99).

In an online environment, due to the lack of non-verbal communication, social presence is a crucial element to help learners feel less isolated (Volery, 2001; Wise et al., 2004), and get to know other learners. (Yildiz, 2009).

Apparently, the sense of presence may be different from that in the real world where outspoken learners may dominate interaction. This might not be the case in the online where shy learners may be more confident to express their thoughts and feelings. The sense of presence can include two interrelated elements: being there and being together. (Lehman & Conceiç ao˜ -Runlee, 2010). Having strong presence online is the result of dynamic behavior or actions such as responding to a post, uploading a photo or changing an avatar. In other words, a learner with strong presence online does much interaction with content, peers and instructors. By using different tools to be actively present, learners gradually have a

stronger sense of community (Ernest et al., 2013). Besides, this gives more freedom to the learner to express his own ideas online better than in the class, as it was mentioned this has given an opportunity for shy students to interact more actively in online platforms.

2.1.6.b. Cognitive Presence

According to Garrison et al. (2001), cognitive presence is "the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication" (p. 11). The studies that use COI as a theoretical framework claimed that cognitive presence is the heart of educational experience and it is associated with social and teaching presence (Garrison, ClevelandInnes, & Fung, 2010; Rourke & Kanuka, 2009; Shea et al., 2010). In the COI model cognitive presence is shown in four phases, starting with a triggering activity in which learners identify problems to be solved. This is followed by the exploration phase where learners reflect the problems individually or collaboratively. In the third phase, learners show their ability to construct meanings from ideas that were developed in the previous phase. Finally, learners apply new knowledge in educational or work contexts.

A serious challenge for the researchers using COI as a theoretical framework is that it is difficult to find clear instances of cognitive presence (Rourke & Kanuka, 2009; Shea & Bidjerano, 2009a). On the one hand, studies that used survey or learners' transcripts extracted from discussion forums claimed that learners could not reach higher phases of cognitive presence (Garrison & Cleveland-Innes, 2005; Kanuka, Rourke, & Laflamme, 2007; Schrire, 2004; Stein et al., 2007). A study by Alavi and Taghizadeh (2013) even conclude that cognitive presence did not adequately occur in the virtual English centers of their studies.Whereas, the studies by Shea and Bidjerano (2009a) and Ke (2010) reveal that learners could reach the highest level of cognitive presence, especially when they are assisted to gain comfort and confidence in online discussion.

2.1.6.c. Teaching Presence

In online learning, teaching presence consists of two general functions: design of the educational experience, and primary presentation of course content (Garrison et al., 1999, p. 89). Teaching presence is the least

researched sub element in the COI model, despite its important role (Arbaugh & Hwang, 2006; Dringus, Snyder, & Terrell, 2010). While social presence functions as a support for cognitive presence, teaching presence has a very important part to play in promoting both social and cognitive presences so that educational objectives can be realized. Teaching presence should be the catalyst for the other two presences (Ke, 2010).

In the COI model, an instructor's teaching presence is shown through three roles:

(i) Instructional design and organization.
(ii) Discourse facilitation.
(iii) Direct instruction.(Garrison et al., 2001).

The presence of instructors occurs even before an online course starts because of their contribution to the development of course content and design, together with computer experts When the course starts, the instructors' clear instruction on how to use it, their facilitation for learner–content and learner–learner interactions are crucial to ensure achievement of study outcomes (Anderson, Rourke, Garrison, & Archer, 2001). Researchers have agreed that teaching presence is a significant determinant of learner-perceived learning usefulness, satisfaction and sense of community (Garrison & Cleveland-Innes, 2005; Swan & Shih, 2005).The correlation between the above three presences has been investigated by many researchers, who used different analytical tools such as exploratory factor analysis, structural equation model, and chi-square automatic interaction detection (Garrison et al., 2010; Shea & Bidjerano, 2009b; Shea et al., 2010). The results of these studies seem to conclude that a combination of social and teaching presence could result in cognitive presence.

2.1.7 **Salmon's Theory of Learning Online and Teaching**

In line with the learning online and teaching inquiry, Salmon (2003) suggest a model with five stages:

- Stage one – access and motivation.
- Stage two – online socialization.
- Stage three – information exchange.
- Stage four – knowledge construction.
- Stage five – development.

This theory serves as the theoretical framework for this study, which was developed through the analysis of actual messages and revealed incremental stages of teaching and learning, each of which required different technical and e-moderating skills from participants. In the first stage, access and motivation, the key element is quick and easy access to the online course. For learners who have experiences with using the internet, this sounds simple but it is not for those who are novice users of computer and the internet. In other words, not all learners have similar level of technological confidence in leveraging technology. (Johnson, Hornik, & Salas, 2008). In addition, a lot of problems may occur including faulty equipment, slow internet connectivity or even fear and anxiety of computers and technology. (Muilenburg & Berge, 2005; Sun et al., 2008). These technological problems surely discourage learners in taking part in online courses (Sun et al., 2008). In addition, using an online language course may not only involve simple actions of logging in and out of the system or sending and receiving messages. Participants may also have to learn how to create an avatar, to drag and drop, to submit completed assignments and when to speak into the microphone in voice recognition exercises. Although there is inconclusive evidence about relationship between internet self-efficacy and learner satisfaction with an online course, it is useful for learners to get training on internet skills before online courses are delivered (Kuo, Walker, Belland, et al., 2013).

Another important aspect in stage one of the model is the e-moderator's ability to motivate learners. Clear instructions on technical and academic aspects of the online course should be thoroughly explained, queries satisfactorily responded to, benefits clearly conveyed and enjoyment joyfully elevated (Wu et al., 2011). Unfortunately, learners' rate of enjoyment in an online course is often lower than expected (Trinidad & Pearson, 2008). Thus, the positive attitude of the e-moderator or instructor is a critical factor to help motivating learners (Liaw et al., 2007; Sun et al., 2008; Yang & Cornelious, 2005). In addition, external rewards like financial incentives and certifications could also be used as a means to motivate learners' participation in an online course, especially in developing countries (Bhuasiri et al., 2012). All in all, the technological barriers are still weaker than for instance paying the fee for staying in the campus; therefore a learner learns how to get to the online courses, if this

learner is well motivated and wants to learn. In the second stage, online socialization, learners start getting to know other users as well as understanding about the online course, learning environment and community (Salmon, 2003). Their social presence begins to take shape in both synchronous and asynchronous communication modes through the use of social cues such as emoticons, avatars and images (Salmon, 2011; Yamada & Akahori, 2007). This social presence is crucial for the establishment and maintenance of a sense of community as well as trust among learners (Dawson, 2006; Tu & McIsaac, 2002), which can be a good foundation to start building a community of practice.

There are certain elements of the online environment that present both opportunities and challenges for learners; for example, the lack of non-verbal and visual clues during the interaction process. In addition, sociocultural differences may hinder learners to be online and interact openly with others, especially in Asian countries where learner–instructor hierarchy is clearly defined. (Kang & Im, 2013). The e-moderator needs to use social and psychological moderating skills to connect learners, defuse any problems and counsel those who feel that they are offended during the interaction with others. The e-moderator's ability to generate discussions among learners through effective social activities can foster participation in the exchange of information in the next stage of learning. (Dawson, 2006).

Stage three, information exchange, marks the commencement of the real learning process, in which learners start to exchange information about the course content or visit external links to online sources. Like in a physical class, there are learners who are more active and vocal whereas others might be more quiet. With state-of-the-art technologies, moderators can extract a quantitative summary of learners' participation in the discussion, but what is more difficult is getting a qualitative feedback and summative assessment from the discussion threads. Accordingly, one of the challenges for the e-moderator is how to ensure that discussions are well structured through productive and constructive information sharing.

This is because in asynchronous interaction mode, learners tend to give their feedback to the most recent posts (located on top of the discussion threads) and thus may forget the focus of the discussion points (Armstrong & Retterer, 2008).

Stage four, knowledge construction, takes the exchange of information to a higher level. Participants begin to relate information from course content and peers' messages to personal and real-life situations and experiences. Working together on the constructivist approach they start to construct knowledge, which is the aim of this stage. However, discussion may become wild if participants do not have an open mind about other participants' ideas, answers and knowledge. In other words, participants should learn to accept that knowledge is not something fixed and, at times, it is not possible to have right or obvious answers to certain issues. This way of thinking is easier for Western learners, but Asian learners are accustomed to the thoughts that what is written in a textbook or presented as knowledge from an instructor is correct and should not be questioned (Marambe, Vermunt, & Boshuizen, 2012; Tran, 2013). Hence, e-moderators have an important role of weaving ideas and opinions together and relating them to concepts and theories of the course.

In the fifth stage of the model (development) participants are not only able to be responsible for their own learning, to reflect the use of technology in the online learning process, but can also take on the role of e-moderators. Some of them can provide technical and academic support to newcomers to the system. At this stage, participants and e-moderators share a constructivist approach to learning whereby deeper thinking and reflection can be fostered through higher-level skills to articulate and evaluate their own thinking and the thoughts of others. This is the highest level of cognitive domain in Bloom's taxonomy structure – the evaluation (Krathwohl, 2002).

In short, Salmon's theory describes in detail the main phases or stages that participants experience during an online learning course, from familiarizing with the technology and getting to know other learners and instructors through to collaboration and construction of knowledge. This model can be used to analyze learners' and instructors' activities in any online course. What is missing is the role of other factors such as technological ones, which are said to have important influences on e-learning and the diverse online teaching contexts in which the instructors may have to take many responsibilities for the learners' online study. (Baran et al., 2011; Parsazadeh, Zainuddin, Ali, & Hematian, 2013).As educational technologies evolve, Salmon has included in later editions of her model (2011) the use of popular interactive tools such as podcasts,

blogs and Facebook for interactional purposes. These tools offer extensive opportunities for e-moderators to enhance learners' collaboration in online learning. For example, through the use of podcasts, e-moderators can send audio files of their own voice to the learners to explain and clarify, and encourage learners to participate more actively in different stages of their online learning. (Salmon, 2011, 2013). As mentioned earlier, this model is used as a theoretical framework for this study because the learners' and instructors' online messages were analyzed to investigate their behavior in the online course, including which stages of learning and moderating these messages could reach. In addition, the implementation of the online course matched the five stages that were described in the above section. It started with the orientation session to provide learners with access (technical aspect) and motivation (academic aspect) followed by online socialization and information exchange and so on. The instructors' activities throughout the study duration also matched the e-moderating elements of the model, including technical support such as answering the learners' technical questions or referring them to technical staff for help. It could be concluded that a learner wills to share his knowledge better in the online since fear of criticize is lower than a direct respond in the class models. Therefore; learners in the online platforms break the fear and try to share what is in their mind, and they ask questions when they do not know something.

World Wide Web (WWW)2.1.8

World Wide Web has come to combine the concept of globalization by breaking barriers, distance and boarders between countries and connect the whole world into small screen which can be accessed by only clicking a mouse. According to Warschauer, Shetzer & Meloni, (2000,p.4):

" The World Wide Web is based on principles of hypertext, a nonlinear linked or layered form of information organization where by documents in data base are connected via hyperlinks. On the web pointing and clicking the mouse in a link brings you to a connected documents else where. The World Wide Web includes not only textual informationand links but also documents based on graphics, audio and video. Technically, these documents are referred to as hypermedia

but the words hypertext and hypermedia are used interchangeably ".

Nowadays, all people have entirely depended on WWW to facilitate their activities and maintain social relationship. Professors and teachers bring flavor and taste into their classes by integrating online materials and activities and deviate from the limitations of the traditional knowledge found on the text books and references. WWW offers opportunities to make lessons appealing attractive, authentic and interactive. On the other hand, students of today are dying to investigate the different aspects of technology specially the Internet. They are keen in learning especially in being in touch with their peers and being parts of the world community.

Chun & Plass, (2000,p.161) mention general capabilities of www features, that have the potential to enhance language learning. There are (a) The universal availability of authentic materials, (b) The communication capabilities through networking, (c) The multimedia capabilities and, (d) The nonlinear hypermedia structure of the information. WWW strongly enhance collaborative work by exposing students to authentic materials to develop their communicative competence and cultural awareness when participating in designing activities and project works. So, students are able to develop their thinking and cognitive process and become active participants. Hausen & Duin, (1994,p.89) report:

"Having examined students cognitive in the culture of learning, they find that students learn best when situating their cognition or their making of meaning in real-world situation that promote active participation in learning process".

The importance of using www in EFL and ESL classes comes from the fact that there are a large information, activities, quizzes and authentic materials available online. Many of these resources are accurate, valid and reliable. These resources have gained many acceptance among teachers and students find them more attractive since they appeal with sounds, pictures, images, videos and hypertexts which are different from convenient traditional text books with plain pictures, Warschaure & Kern, (2000, p.12) report:

" The world wide web offers an abundance of information resources whose utility of language learning is just to be tapped· Using the world wide web, students can search through millions of files around the world within minutes to locate and access authentic materials (e·g newspapers, magazines, radio broadcast, short videos, movies review,books) that correspond to their own personal interest "

A lot of resources for all people can be found in the web. The web is occupied with abundance of information and resources of any sort a person would ever want to know scattered in big and different locations. According to Internet tutorial, (2007), accessing these resources has become a real dilemma for those who lack at least a proper method of searching. Losing focus, wasting time and getting lost is something natural. For teachers and learners to avoid these, search strategies should be implemented carefully. Graus, (1999) reports:

" The www contains information on any subject one can imagine· The problem, however, is locating this information· To beginners, the www resemble a huge labyrinth where locating the desired materials,…··with a little knowledge about using search tools properly and some experience, this problem can easily be overcome "·

Computer technicians and experts have identified a number of search strategies named as search engines. With these search engines, accessing the web has become so easy. Macy, et.al, (2002, p.169) define search engines as:

" An Internet site dedicated to assisting people in their search for information in the Internet, which usually provides simple format or for typing in keyboards or clicking in topic areas to effectively locate the needed information "·

2.1.9 Internet Tools and Resources

Internet when being used as a teaching and learning tool for supporting teachers and learners, has a lot to offer for learning process. There are a great many resources available on the Internet. Here is a table consists of websites with resources for teachers and learners. These resources are illustrated in table (2.1) below:

Websites	**Information**
1. www.breakinnewsenglish.com	Interactive and printable English lessons.
2. News Report	Lessons using BBC reports.
3. tedxesl.com	Lessons based around Ted talks.
4. dictionary.cambridge.org	On-line dictionary.
5. www.esl-lab.com	Adults and children's voices
6. www.esl-lab.com	Video snapshots for ESL/EFL students.
7. www.voki.com	Create speaking characters to communicate with friends.
8. www.dvolver.com	Make a movie.
9. www.engvid.com	English video lessons.
10.www.lyricstraining.com	Learn through music and the lyrics of songs.
11.www.quizlet.com	Free study tools.
12. www.listenandwrite.com	A dictation tool.
13. www.makebeliefscomix.com	Make your own comic.
14. storybird.com	Make your own story.

Table (2.1) Internet Search Tools

Authentic Materials 2.1.1

Taylor, D, (1994) states:

" Many complains about the lack of authenticity in the language classroom fail to define different kind of authenticity. It is commonly assumed that there is some sort of global and absolute notion of authenticity in which all the different kinds must be simultaneously and completely present. While there are relatively clear definition available of what is meant by authenticity in relation to teaching materials and texts, there is much less agreement about what constitutes an authenticity of context and of task or activity ".

The concept of authentic materials has been identified as the materials in which teachers used to create meaningful contexts for their students to develop their communicative competence. Authenticity is defined by many researchers, for instance Morrow, (1977,p.13):

"An authentic text is stretch from real language produced by a real speaker or writer for real audience and designed to convey a real message of some sort ".

The area of learning and teaching a foreign/second language needs some authentic materials and contents to promote and enhance communications, which are available on the Internet, Macy & et.al, (2002,p.v) report:

" A second/foreign language can be made more accessible and be better retained when question takes place in a communicative and natural environment enhanced by meaningful and authentic materials that aid in the development of proficiency in the area of communication and culture ".

2.1.10.1 Electronic Mail (E-Mail)

Electronic mail (e-mail) is one of the most popular Internet applications. Its popularity comes from the fact that, it is fastest and cheapest means of communication. The development of information and communication technology along with wide spread use of the Internet has rapidly promoted e-mail as a common international communication media (Chen,2006). People check their e-mail regularly to send and receive messages, pictures, files, software programs, etc, Macy & et.al,(2002,p.166) define e-mail:

" Sending and receiving messages through phones line or networks using computer program ".

Using e-mail in teaching and learning English is very important to enhance communication between teachers and students and students themselves, Warschauer, (1995) reports:

" E-mail is all about real communication and since that ultimate objective of EL education it can prove very useful. E-mail provides students with an excellent opportunity for real and natural communication. Teachers are always looking for these opportunities , since most EFL classroom students lack sufficient chances to reallt a perfect tool for this ".

There are many reasons on using e-mail in teaching and learning English. Belsle, (1996) has identified a number of reasons on the issue of using e-mail in learning and teaching English:

1- By using e-mail, students will become familiar with a means of communication that is vital to their survival in the in the 21st century. It is very likely that e-mail will, to some extent replace traditional means of communication, such as fax, telephone and ordinary mail.

2- Contact between teachers and students is no longer limited to the time they spend in the classroom. They can communicate whenever it is most convenient to them. This way support two ways of feedback in EFL language instructions: reinforcement and information.

3- Students has a form for expression themselves and asking questions. Some students who are shy and do not like expressing themselves in a group simply do better in writing.

2.1.10.2 Video Conferencing (VC)

The use of video conferencing is not only seen as a new technological tool for teaching but also beneficial for learning, Felterman, 1996 & Wang, 2004). Not only does video conferencing enable learners to access vocal and facial cues that they miss out on the text communication (Wanifan, & Davis, 2004) but the ability to see and hear the person you are communicating with increases the sense of social presence, (Edigo, 1988), that learners feel. This is seen as important for successful communication. Videoconferencing as described by National Centre for Technology in Education (NCTE), (2003):

" Two or more participants, based in different physical locations, can see and hear each other in real time using special equipment ".

In the area where distances between learners can be vast, videoconferencing is better to emerge as a valued educational tool. Videoconferencing is ideal for virtual field, collaborative work and community events

Videoconferencing software such as NetMeeting, CU-see and ISpy provide for collaborative experiences, with application shared among participants in the meeting, Under the control of the presenter. The participants can view a power point presentation for instance and they can contribute to the development or modification of an application. Each student can gain control of the mouse in turn. This collaboration requires some discipline among the users/students and is catered to by good teacher/facilitator, (Farren,2002). The students can also engage in dialogue with native speakers of their target language. The situation is created whereby the students wish to communicate to express themselves and to find out information. The motivation comes from the students, and the topics that are prepared in advance as student centered. According to National Council for Curriculum and Assessment (NCCA),(2003), an integrated approach with classroom activities containing more than one component is achievable using videoconferencing if preparation is through. Foreign language teachers thinking of experimenting with

videoconferencing need to be sure that student communication with target language via (vc) involve three components of foreign language syllabus: basic communicative proficiency, language awareness and cultural awareness.

2.1.10.3 Mailing Lists

Mailing Lists are another sort of applications offered by Internet. Generally, Mailing Lists can be defined as a discussion forum based on e-mail. Topics being discussed are interaction among different people, who have subscribed to a certain mailing lists via written work. This sort of communication is in sharp contact with face-to-face communication.

David, Eastment, (1999) defines Mailing Lists as:

" Mailing Lists are simply, computer programs, often running in university environments, which allows individuals with a common interest to share information via Internet ".

In the sense of English teaching and learning, Mailing Lists allow individuals to participate in a discussion about certain issues that are related to their own interests and profession. Teachers and learners are benefited a lot when subscribing to a certain mailing List. They are able to ask questions, share information and present their comments only by sending an e-mail message to the defined Mailing Lists and the message automatically distributed to all members who are subscribed to that list, Osman, (2008) reports:

" The possibilities offered by subscribing to Mailing Lists are benefited imagination. Learners and teachers are in positions to stay up-dated by acquiring new information. Moreover, subscribing to mailing list give subscribers a useful insight into different aspects of culture since most of the topics debated certain idioms, proverbs, expressions, jargons, slangs, languages and much more. Subscribers should be aware of presenting their views, opinions and comments in an appealing manner to attract the attention of the most of the participants and get the desired feedback. In doing so, teachers and

learners will automatically enhance their logic and skills. Using word processor program to post an e-mail encourage learners to be aware of fundamental aspects of language, such as grammar, vocabulary, organization, style etc ".

Being skillful in activities all these, learners would definitely develop their writing proficiency and being ready to participate in discussing issues since the language use sometimes is evaluated as a highly technical level as debated by experts and professional people.

2.1.10.4 Real Time communication

Real time communication is the most attractive and popular means of communication over the Internet. This application enables people to chat with each other via written and verbal formats. Real Time Communications has existed in many channels such as Multi User Object Oriented (MOO) Internet conferencing (ICQ) and Internet Rely Chat (IRC), However, all these channels have the same features and provide the same services. IRC has captured the prominent place in chatting over the net as the best software program admired by many users. IRC is a system which enables its users to communicate with another users in a real time. In another definition, its program which constitutes imaginary destination on the internet gathered users all over the world to communicate in a form of written and verbal communication. In addition, photos can be displayed by using digital video camera, Al-Mosssi, (200,p.22), Grans, (1999) reports:

" Internet Relay Chat (IRC) is the best known example of what the net has to offer with respect to real time communication. It is a multi-user chat system written by Jakko Oikarinen in 1988. IRC allows people together in groups called channels to talk about specific subjects. Private conversations are also possible. IRC allows users to communicate by splitting the screen into two parts, in the bottom half the user writes his/her contribution and after hitting the entry key, the messages appears in the top half

so that the other who are on that particular channel can read it and react to it ".

According to what is quoted above IRC developed and allowed multi users around the world to communicate by splitting screen into two parts with the writer's input displayed in one half of the screen and the interlocutors in the other. Although, the word "chat" is used, communication is text based.

A-l Mossi, (2001,p.232-233) identifies a number of advantages of using IRC as means of communication in the field of education:

(1) IRC allows people of the same interest and fields to held meeting, conferences and debates all over the world, regardless of distance and spaces. (2) IRC has a crucial role to be played in developing people skills, knowledge and information by enrolling to distance education and obtaining degrees and certificates without leaving their places and quitting their jobs. (3) Professors and universities lecturers are able to broad cast live lectures any where. (4) IRC has successfully over comethe problems that are related to shortage of staff members, by broad casting lecturers from different universities. Osman, (2008) reports:

" Information technology has deeply affected the ways in which tv channels such as Al-Jazlra, Al-Arabia, BBC World and CNN are presenting its services to their audiences. These channel are compete each other to present their news in a reliable and accurate manners. In doing so they have implemented some of communication technology devices such as IRC to host people from different parts of the world to comment and participate in some issues wherever they are socially, politically or commercially. Depending on the fact that news will be more reliable when heard from the horses mouth ".

2.1.10.5 News Groups

Newsgroups are another means of communication among people round the globe facilitated by the applications of Internet technologies. This

service is accessed by Internet Service Provider (ISP) it is computer-based discussion i.e communication exists in a form of discussion forums. It allows people to share information and discuss some issues related to their own interest, Nurain, (2004, p.55) reports:

" Newsgroups are referred to as discussion groups on Usenet. Usenet is defined as computer-based discussion system that is widely used on the Internet. Subscribers can write a message that may be read by many other subscribers who are sharing the same interests ".

Individuals with similar interests have grouped themselves together, communicating and sharing information, Graus, (1999) reports:

" Usenet started in 1979 as a method of sharing information about UNIX Computer System. From its earliest days, through participants showed even more interest in discussing social and political issues. Today there are over 14,000 different Newsgroups on every topic imaginable. Each service provider decides how many of the Newsgroups will make available, but most have, at least a few thousands to choose from ".

In the field of English teaching, Newsgroups have a lot to offer while being used as a teaching and learning tool, it allows teachers to participate in discussions with professionals and experts. In doing this, their experiences, knowledge and cultural awareness will rise to the peak.

2.1.10.6 CD ROMs

CD-ROMs are another tool which used effectively in teaching and leaning field. CD-ROOM (Compact Disk Read Only Memory) are now cheaply and widely available. CD-ROMs have ability in holding text, video and audio, David, Eastment, (1999) describes CD-ROMS as follows:

" Capable of holding text, graphics and audio, CD-ROMs offer sufficient capacity to contain encyclopedias and complex multimedia resources"

CD-ROOMs are a storage technology which can provide self-contained resources or be supplemented by the latest information downloaded and up-dated from the web. There are many CD-ROMs designed particularly for EFL with many expected to follow. As a result of the existence of the Internet CD-ROMs have been developed in the capacity comparing to the old one, Eastment, (1999) states:

" A recent development has been brought the appearance of hybrid-CD-ROMs which can be linked to an Internet site for updating ".

Microsoft produce two English language versions of most of their CD-ROMs: "US English and "World English", the latter uses British spelling conventions.

2.1.11 Challenges Encountered with Web-based Learning

The information age presents many challenges for those in education and government. The need for the whole population to be able to access and use technologies such as computers, the Internet and digital television are often seen as crucial for establishing a skilled work force and empowering citizenry for the twenty-first century. Government around the world have therefore set targets developed politics to help all adults to learn. Despite the vast sums of money and effort being directed towards ICT and education, we still know little of how close we are to establishing technology-based learning and what problem may be faced along the way. Governments and those involved in public services therefore concern of how ICTs may be the best shaped for contemporary society. Administrators, educators, and other education stake holders are concerned with utilizing the best methods and technology tools available to improve and enhance students' performance, (Hubbard, 2003) affirms that substantial number of experts are concerned with the degree of effectiveness of technology to enhance learning. The most important for TELL to be continued is the examination of appropriate and successful uses in foreign language curriculum and instruction. (Nutta, 1998, p. 49) indicates: *" whether technology should attempt to emulate the*

characteristics of a communicative class room, engaging students in real and meaningful communication or provide the type of tutorials and drills that tend to be de-emphasized in the current teaching practice".

This researcher also believes that there must be flexibility and a variable role for technology applications as well as instructional methods to deal with learners. As suggested by Oxford, 1993, Rivera-Castillo, Feyten and Nutta, 1998, technology will only be effective if some conditions are met:

a. If it deals with students' needs and interests and finds ways to increase learners' motivation.

b. If the appropriate technology is used for each aspect of foreign or second language learning and acquisition, the educational goals and the kind of learners are considered.

c. If it provides a meaning. Focused on learning environment, abundant authentic language input, uses relevant themes and meaningful tasks.

d. If the technology is effectively exploited in the particular instructional situation.

e. If it deals effectively with the difficulties that students may encounter. Many researchers are continually asking questions about how technology is integrated in educational settings and how to best match technological capacities with students' learning needs. Researchers and practitioners agree that successful integration involves more than simply introducing a software program or other innovation to the students in the classroom. Technology integration must be planned and based on the curricular goals and any obstacles exist must be overcome. According to Cooley and Johnston, (2000), there are eight major factors that have hindered technology integration in our classrooms:

- Some schools overspend on hardware and have too little software or funds for training teachers.
- Decision about hardware and software purchases may be made with little teachers resulting in unused technology.
- Internet connections in schools may not be located where teachers can use them.
- Technology training for teachers seldom focuses on classroom applications.

- The use of technology implies the use of new teaching strategies that actively engage students and rely on collaboration among teachers.
- Inadequate technology support and not enough funding for maintenance, repair and upgrades of equipment consider as additional setback.
- Many teachers resist technology, because it does not match their educational philosophy
- Finally, schools districts incentive programs may focus on raising students' test scores, leaving technology as a less priority item.

Though, technology tools themselves should not be the focus. Technology is not the teacher, it is a tool the teacher uses to widen the students reach and should complement and enhance what a teacher does naturally. Bassett,(2005).p.77 states: *" The digital age is not about technology, it is about what the teachers and learners are doing with the technology to extend their capabilities"*.

On the other hand, while some changes are brought by technology have been positive, some issues remain unsolved, for example, teachers lack for training and there are poor distribution of technology among teachers. Most of the studies have focused on the effect technology has on students, while more attention should be paid to the effects technology has on teachers and the way they teach. Students move on but teachers remain to influence the next group of students, Wilder, (1997). Even though, this statement is presented ten years ago and it still rings true today.The teacher remains a major gate keeper to technology.

Using Internet applications in English classes as a medium for supporting English teaching process without a concerted plans and strategies is definitely led to undesired outcomes, Warschauer, Shetzer & Meloni, (2002, p.85) reports:

> " The Internet is dramatically altering how people read, write and communicate. The Internet is so vast and complex that learning how to incorporate it effectively into the language classroom can be quite challenging, because of how quickly the Internet continuous to change. For all these reasons learning how to use Internet for teaching, has been compared to trying to get a drink of water from a gushing fire hydrant ".

Students specially teenagers, are traditionally motivated through using computers and the web. Students level of English can be varied and need to be skilled in language. Students need to be computer literate, how to operate the Internet browser, how to search for sites using a search engine and how to save sites before engaging in activities, according to Brandl, (2002): " *The design of an Internet-based lesson is largely determined by teacher's pedagogical approach, his/her technological expertise, and the students language proficiency ".*

2.1.12 Learning Vocabulary

Many L2 learners do some mistakes about the definition of vocabulary learning. They think that to know a word is simply to know its forms and meanings. It has been recognized by a large number of lexical researchers that knowing a word involves more than just understanding its meaning (Aitchison, 1994, Laufer, 1997, McCarthy, 1990, Nation, 1990, Richards, 1997, Schmitt,1998, Schmitt, 2000). There are several aspects of vocabulary knowledge that need to be mastered in order to know a word. Acquiring a word is not simply a process of connecting word form to word meaning, but a complex development involving the learning of grammatical functions such as parts of speech, sociolinguistic factors such as word connotation, and frequency intuitions such as collocations of target words in diverse contexts (Nation, 2001). As Read, (2004) states:

" comprehensive word knowledge involved not only the semantic features of a word, but also its orthographic, phonological, morphological, syntactic, collocational and pragmatic characteristics".

The nature of vocabulary acquisition is complex and it is impossible to learn all of these types of vocabulary knowledge immediately. Vocabulary learning is not an all-or- nothing piece of learning, but rather a gradual process of one meeting a word adding to or strengthening the small amount of knowledge gained from previous meetings (Nation, 2001). Firstly learners need to recognize the word's form, pronunciation and basic meanings, then with further experiences or practice, their word knowledge will move along gradually and finally reach the point of being able to use the word freely. Receptive and productive types of knowledge of a word have commonly been to describe the degree of learners' word knowledge (Nation, 2001, Read, 2002).

2.1.13 Why Vocabulary is Important

Vocabulary is central of English language teaching and learning, because without sufficient vocabulary students can not understand others or express their ideas. (Wilkins, 1972) states:

" while without grammar very little can be convey, without vocabulary nothing can be convey ".

Lexis is the core or heart of language Lexis, (1993). Vocabulary knowledge is very important in reading comprehension, because knowledge of a word involves at least meaning, phonological, grammatical and morphological awareness. In their study, Coady et al, 1993 found that vocabulary not only had appositive effect on reading, but also led to reading proficiency. In order to be successful in academic studies, it is necessary for EFL learners to be familiar not only with the high frequency words of English, but with the general academic vocabulary that is common to many academic disciplines. According to Nation, (1990), vocabulary can be generally divided into four categories: high frequency vocabulary (general service), academic vocabulary, technical vocabulary and low frequency vocabulary. On the other hand, there are three significant aspects of vocabulary, teachers need to focus on (form, meaning, use). According to Nation, (2001) the form of a word involves its pronunciation (spoken form), spelling (written form) and any parts of the words that make up this particular meaning item (prefix, root, suffix).

2.2 Part Two: Review of Past Related Works

This part of the study views research from inside and abroad, the first one is conducted by:

2.2.1 First Study: Clark Denmark (2015): An Online Learning Platform for English as a second language for young deaf Indian Sign Language users: usage patterns and user engagement.

This study examines the learning of written English as a second language by young deaf Indian adults on an English Learning Platform. The overriding concern in deaf education has always, of necessity, been basic literacy (Carlson, 1996; Wilbur, 2000). In this study, deaf students in India have been taught by a classroom teacher and use an online learning environment for further instruction and reinforcement. The advent of computer-mediated learning in the last ten years has led to the central

function and role of computers as learning aids and this type of learning has garnered a substantial amount of interest.

This research investigates the use of an English Learning Platform (ELP3) as a provision that facilitates and enhances learning for sign language users learning English as a second language (L2) through the signed and the written mediums (Pandian, 2006)

Use of an ELP3 environment is complicated by the fact that sign languages rely on face to-face communication (Johnson & Johnson, 1986), so it is necessary to ascertain whether the lack of face-to-face visual attention and cues in the ELP3 affects learning abilities. Studies of L2 classroom interaction suggest that co-operative and comprehensible interactions facilitate L2 learning (Kitade, 2000)

A statistical study of event log data drawn from the ELP3 and a questionnaire is used here to generate an understanding of how the online platform is used by a group of deaf learners and indicates that they generally like the ELP3 with some preference for certain features.

Results of the study demonstrate that the frequency of access to the platform decreased through the duration of the research and the findings indicate a clear preference for signed explanations of topics. In addition, focus group interviews serve to determine deaf students‟ views of using the ELP3 and suggest that the group consider the ELP3 to be a favorable route to learning English alongside classroom tuition in a blended learning approach. The ELP3 offers potential benefits for L2 learning because it provides a broad range of interactions, involving different levels of proficiency, and these and other issues are considered at length in this thesis.

2.2.2 Second Study: Digital Technologies in Sudanese EFL Classes: by Rehab Abdelsalam Elsanousi

This study sets out to investigate the using of digital technologies in Sudanese University EFL undergraduate students in order to shed light on EFL students of English self-efficacy and active learning opportunities. The study also aimed at finding out if using digital technologies played a role in sustaining EFL self-directed learning and learning autonomy. Moreover, the study intended to examine Sudanese University teachers' attitudes towards using digital technologies as part of their EFL instruction. In this study the researcher hypothesized that there is a great possibility that digital technologies would provide active learning opportunities to Sudanese University undergraduates. Digital technologies provide more challenges to EFL students to become more independent learners. There is a great tendency that Sudanese EFL

teachers have positive attitudes towards using technologies to enrich their instruction and course delivery method.
To examine the set hypotheses, the researcher adapted the descriptive and analytical method. Data were collected from many resources including questionnaires. The research reached the conclusion that using digital technologies at our universities will provide our students with much rich opportunities to practice and acquire English. Moreover, the study found that using technology has a positive impact on students' direct learning and learning autonomy. Also the research shows that EFL faculties were more likely to use digital technologies and have positive attitudes towards using digital technologies in their instruction.
Consequently, the use of digital technology is so strongly recommended for EFL learners and that classes should build and prepared in a way to allow for incorporating technological devices. It was also found that almost all students are capable of possessing the right of mobile phones that will help them cope with their classes. Digital technology is available, cheap and every student can have access to. Classrooms can easily be furnished with the desired types of technologies.

2.2.3 The Third Study

Ahmad, A. (2014) Towards Mobile learning Deployment in Higher Education in Brunel University London. Published Ph.D. Thesis.

The aims of this research work are to study students‟ readiness for M-learning, investigate the factors that affect students‟ acceptance and analyze M-learning literature in order to propose and evaluate a model which can be used to foster the sustainable deployment of M-learning within teaching and learning strategies in higher education institutions.

The research was conducted at Brunel University, West London. Data were collected from Students from different undergraduate levels. Data were reported from 174 participants (125 males, 49 female students using three surveys. The outcome of this research leads to a conceptual model that gives a wide overview of all elements that need to be addressed in the mobile -learning the environment and bridges the gap between the pre- and post-implementation phases in order to ensure sustainability. Furthermore, the model provides university educators with a planned approach to incorporate Mobile -learning in higher education curriculums with the aim of improving teaching and learning.

2.2.4 The Fourth Study

Mohamad, M. (2012) Mobile learning in the English vocabulary acquisition: Toward the implementation in Malaysian secondary schools. Unpublished Ph.D. Thesis

This thesis explores the use of mobile phones to support English vocabulary learning in Malaysian schools with the interview as the main research tool. The methodologyconsists of rigorous steps in developing, evaluating and disseminating the implementation strategy as well as exploring other issues associated with mobilelearning implementation in Malaysianschools. Ithas been established that the implementation strategy developed in this study would have the potential to provide guidance in the implementation of mobile learning in Malaysian schools. The findings revealed the opportunities and the challenges in embracing mobile phones as a learning tool.

2.2.5 The Fifth Study

Osman, M. (2013) Evaluation of mobile and communication technologies for language learning. Unpublished Master Thesis.

This master‘s thesis explores the use of mobile and communication technologies in English Language learning. Specifically, the use of mobile phone and wiki in language learning is investigated among the undergraduate student in a higher education institution. By applying both quantitative and qualitative methods, three themes are derived in the study; accessing, communication and usability. This finding suggests that although the use of mobile phone and wiki in language learning is feasible, further studies are needed to enhance the possibility. This study is important in providing alternative learning tools in the area of English Language learning.

2.2.6 The sixth Study

Baharom, S.S. (2012) Designing mobile learning activities in the Malaysian Higher Education Context: A Social Constructivist Approach. Unpublished Ph.D. Thesis

This thesis explores how mobile learning activities, developed using social constructivist learning principles have the potential to support an undergraduate in English Language learning. The methodology applied in the study is a design-based research with two stages of data collection.

The research tools include questionnaires, students' blog posts, and online interviews. The findings indicate that students have a positive attitude toward the use of mobile learning in their learning activities. The study also highlighted several types of mobile learning activities which should be introduced; contextual, reflective, and collaborative, multiple media, communication and learning management.

2.2.7 The Seventh study

Maria B. Cruz (2012) Student and Teacher Perceptions of a Mobile-Based Biology Vocabulary Study Tool for English Language Learners published Ph.D. Thesis.

This study investigated biology students' perceptions of their experience independently using an iPod Touch-based mobile study tool to complement classroom learning. Interviews with the students' biology teacher, an educator with a strong background in language acquisition teaching and learning, were also used to supplement student testimony.

2.2.8 The Eighth Study

Al-Fahad (2009) investigated students‟ attitudes and perceptions towards the effectiveness of M-learning. The author conducted a survey of 186 undergraduate students from different colleges in order to understand how they used mobile technologies in their learning environments. The results illustrated that M-learning is widely accepted by the student community. Students agree that wireless networks increase the flexibility of access to learning resources. Also, students are interested in using mobile learning tools via laptops, mobile phones, and PDAs to be able to access the information anytime, anywhere. The results of the study indicated that M-learning activities can engage students in the learning process and transfer them from passive learners to behaviorally and intellectually active learners.

Chapter Three

Methodology

3.0 Introduction

In this chapter, the researcher will examine the matters that are related to the methodology implemented in this study and the procedures used in the collection of data gathered for this investigation. The chapter gives detailed information about the adopted methodology, the data collection tools, the respondents to the questionnaire and the research test. The means of determining the validity and reliability of the data will also be elaborated on as well as the limits within which the study is confined.

3.1 Study Design

The major purposes of this study is to investigate the Web-based learning to enhance English vocabulary to students who are specialist in studying English language as a foreign language in universities. In order to achieve this purposes, a sample population of university English language teachers and students were selected for this study. The responses of both groups were labeled and computed by processing, the collected data using SPSS Software. The study consisted of two variables. One was independent variable and the other was dependent variable. The independent variable of the study was Web-based Learning (WBL) as the strategy of teaching and learning and the dependent variable was vocabulary. Findings were made for each statements as detailed in the next chapter. The hypotheses made by the researcher in chapter one will also be tested in the light of these findings.

3.2 Application of the Study

After checking the reliability and validity of the questionnaire and the test, the researcher distributed them to the study sample that consists of 120 teachers for the questionnaire and 150 university students. Letters were written to both groups to explain the purpose and the directions to respond to them. The qualitative (nominal) variables of Likert scale (i.e Strongly Agree, Agree, Not sure, Disagree or Strongly Disagree) helped largely for systematic analysis of the data.

3.3 Data Analysis

The Statistical Package for the Social Science (SPSS) for Microsoft Windows 10.0 was used to complete the analysis of the collected data. This Microsoft Package provides descriptive statistics, including frequencies, means, standard deviations and percentages so as to give comprehensive image of the data and results of the analysis.

3.4 Population and Sample Size

The population from which the sample size was selected, involved both EFL teachers and EFL university students. The teacher respondents were English language teachers currently teaching in Sudan University of Science and Technology. The selected sample of this group comprised 120 teachers in total. As for the second group, they were university students who were learning English as a major subject in Sudan University of Science and Technology (SUST) during the academic years 2017-2018. The respondents to the teachers' questionnaire and the pre and post-test for students were selected randomly from both groups.

The data were collected by the questionnaire that was administered to teachers and by the test to students. The major aim of the questionnaire was to identify the attitudes of English language teachers who were teaching English language to university students as major subject on the topic mentioned above. The questionnaire consisted of 16 items. The teachers' questionnaire was responded to by 120 EFL university teachers while the students' test was responded by 150 EFL university students who were in the fourth level. After collecting the data, the statistical calculation was conducted to analyze the data. The tables 3.1, 3.2 and 3.3 below provide background information about teacher respondents. As for the teacher respondents, the table details their genders, qualifications and the levels they taught. It is clear from table 3.2 below that the teacher subjects who responded to the questionnaire were all involved in teaching English language in Sudan University of Science and Technology and 5 of these teachers were professor while 10 were Ph.D Degree holders, 45 were master holders and 60 were bachelor holders.

The Sex

Table No.(3.1)

The Frequency Distribution for the Study Respondents According to Sex:

Valid	Frequency	Percentage%
Male	70	59.2
Female	50	40.8
Total	**120**	**100**

Table No (3.2) The Frequency Distribution for the Respondent's Answers according to the academic qualifications

Valid	Frequency +262569+-	Percentage%
Bachelor	60	50
Master	45	37.5
PhD	10	8.3
Professor	5	4.2
Total	**120**	**100**

Table No (3.3) The Frequency Distribution for the Respondent's Answers according to level taught.

Valid	Frequency	Percentage%
Junior	50	41.7
Senior	49	40.8
All	21	17.5
Total	**120**	**100**

3.5 Research Tools

In the following section, the researcher will describe the instruments employed to collect the data for this study. As stated before, these tools pertain to both quantitative and qualitative data collection methods. Chamot (2004:14) argues that questionnaire as data collection method, has limitation but provides important "insights into unobservable" facts about learning.

Both questionnaire and test will be used for data collection for this study. The following sections give details on the development of each teachers' questionnaire and the test.

3.5.1 Teachers' Questionnaire

A survey questionnaire was developed by the researcher as a means of data collection for this study. The questionnaire is the main instrument for this research because the questionnaire is the most convenient and suitable instrument to cover such large population, also because it is the most familiar instrument to collect required data for this research. Moreover it is less expensive. "A questionnaire is much more efficient in that it requires less time, is less expensive and permits collection of data from much larger sample" (Gay,1987,p.195). Based on the mentioned reasons the researcher prepared a questionnaire.

Questionnaire can yield three types of data: factual (demographic characteristics), behavioral (peoples' action) and attitudinal (peoples' attitudes, opinions and beliefs) (Dornyie, 2003:8). The questionnaire consisted mainly of three sections, each section starts with detailed instructions in order to avoid any misunderstandings, part one: was intended to elicit general information about the teachers' background

involving the teachers' gender, their qualifications and the level they teach (see the tables 3.1, 3.2 and 3.3). Part two: was intended to elicit teachers' habits in communicating via Internet and whether teachers use ICT tools in their teaching or not. Part three: consisted of 16 questionnaire items which centered on major three areas related to the use of web-based learning (WBL) in teaching and learning English language in general and vocabulary in particular: (1) the potential of using ICT and Internet tools in teaching and learning English (2) the potential of using WBL in teaching and learning English language in general and vocabulary in particular (3) the obstacles that hinder using of Internet in and outside classroom in university environment (see the appendix).

In many cases the questionnaire respondents were required to respond to the statement by using five-point scales, teachers had to tick the option indicating their view under the scale: Strongly Agree, Agree, Not Sure, Disagree or Strongly Disagree. This scale was based on the Likert scale which also coded items on four points:" Very Important", "Important",Some how Important" or "Unimportant". Respondents to the questionnaire showed their views on given statements by selecting from the scale that matched their views.

To ease communication with the teacher respondents, letters were written to them showing the purpose of the questionnaire and how they could respond to the items.

3.5.2 Research Test

The researcher conducted pre and post-test. The pre-test was designed to test students linguistics competence in terms of difficulties associated with vocabulary and its usage that students may face. Moreover, it is also intended to measure students' prior knowledge and performance before being involved in the treatments.

While the post-test was conducted to assess the impact of Web-based Learning on enriching and enhancing students understanding of vocabulary in the terms of on-line dictionaries. The test would therefore, measures the impact of different treatments received on students' overall performance in pre and post-tests.

The researcher draws on what has been discussed on the literature review in addition to, the previously mentioned works to design the evaluation tests that suit the research purpose. The main objective of this test has purely been designed in view of investigating the effectiveness of

using web-based dictionaries as a source of promoting students' vocabulary acquisition based on the fact that technology minimizes time and efforts. Students were assigned to use on-line dictionaries to understand unfamiliar words which may encounter them while studying their English courses. Students were given a quick review on some technical strategies in terms of how to access and use on-line dictionaries.

In order to evaluating students' vocabulary achievement with the aid of their assigned dictionaries, researcher designed vocabulary test which consists of three parts: part (1) is to choose the best meaning of underlined words or phrases from the given alternatives. Part (2) is the gab-filling question which is to choose the best words from synonyms. While part (3) is to form words according to their position on the sentences.

The control took to the test in their lectures theatre (traditional environment) and the experimental group took to the test in the computer lab (computerized environment) with internet connection. The researcher along with the lab assistant made the URL http://www.dictionaries.com as the home page to avoid delaying and time consuming on surfing the net. After time limit papers were collected and marked by the teacher.

The research test was adopted from ENGLISH ADVANCED VOCABULARY AND STRUCTURE PRACTICE (by MACIEJ MATASEK). This book provides well prepared tests to be of a great help for those who want to apply for TOFEL test. The book has been published by educational experts who paid much concerns to the most fundamental aspects of validity such as content validity, criterion-related validity and construct validity.

3.6 Validity and Reliability of Tools

Parten (2002) pointed out that one of the things that determines the validity of any research instrument is whether it measures exactly what it intends to measure. In order to ensure content validity of a tool such as questionnaire, Parten further argued that emphasis should be drawn on the important materials to investigate and that written questions should be used rather than just spoken ones.

Bond (2003: 179) comments that it is essential for researchers to achieve validity and that "genuine scientific measurement" is critical for research to make so as to seek valid out comes. The validity of the instruments was gained by giving the instruments to EFL jurors:

experienced university professors who expressed their views and gave suggestions. Their suggestions were taken into consideration and the instruments were modified accordingly. Finally, they indicated that the test guidelines were clear and appropriate to be a valid measured.

Sliger and Shohamy (1998: 123) further emphasize the importance of reliability and validity of the data. They further argue that the reliability of research tool entail that the same results should be obtained if the same measurement is used. Rowe (1996) states that the validity of a research is based on the information supplied by the researcher as an outsider to the learning environment or by the teachers and students as insiders. Rowe further argues that data obtained by teachers and students are more valid than data collected by outsiders. As for this study, it is noteworthy that the researcher is not an outsider to the educational environment as she is actually involved in teaching English vocabulary to the university students, whom used as subjects for this study.

The researcher has conducted a number of tests for the purpose of collecting data. These tests were evaluated in terms of their validity to test that they were not only relevant by free from systematic errors but also produce valid information. The conducted tests were adapted from URL: http://www.vocab.com.quizzes. Since these quizzes are designed by experts and test specialists and published in the web for public, they can be estimated with a higher degree of validity.

These tests must have the ability to produce the same results when re-administrated on the same students under the same conditions. This process is known as test reliability. The researcher adopted test-retest method for the purpose of measuring reliability.

Statistical Reliability and validity for student's test

The reliability coefficient was calculated for the measurement, which was used in the test using Alpha - Cronbach coefficient Equation as the following:

For calculating the validity and the reliability of the test from the above equation, the researcher distributed the attest to respondents to calculate the reliability coefficient using the Alpha-Cronbach coefficient the results have been showed in the following table:

	Reliability	***Validity***	***N***
ALPH – CRONBACH	0.89	0.93	

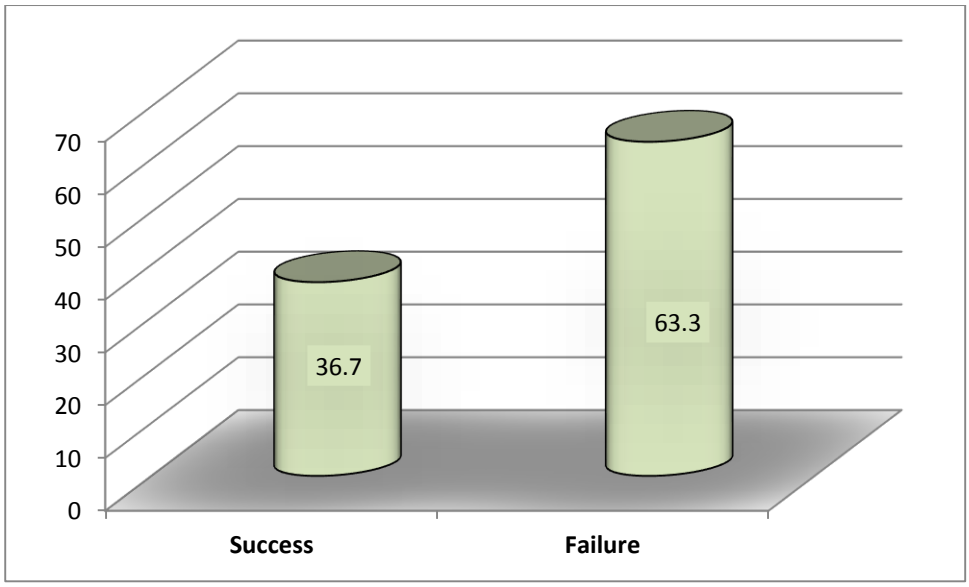
Validity = $\sqrt{\text{Reliability}}$.

From the above table it's shown that the validity of the test is very high (0.93). This indicates that if we repeat the test we are sure with 93% that it's going to give us the same results:

Table (4) the frequency and percentage distribution of the students according to section (1)

Valid	Frequency	Percentage
Success	55	36.7
Failure	95	63.3
Total	150	100

Figure (4)



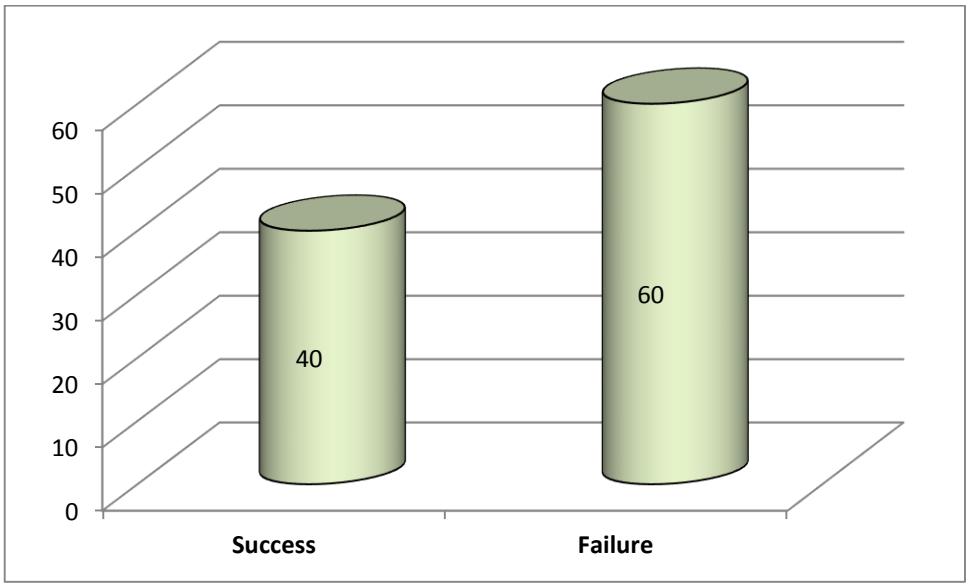
It is clear from the table above No. (4) and figure No (4) it's shown that there are (55) students in the study's sample with percentage (36.7%) are success the test in section number 1 (*Choose the meaning of*

underlined words or phrases from the given four alternatives) . There are (95) persons with percentage (63.2 %) are failure.

Table (5) the frequency and percentage distribution of the students according to section (2)

Valid	Frequency	Percentage
Success	60	40
Failure	90	60
Total	150	100

Figure (5)



from the above table No.(5) and figure No (5) it's shown that there are (60) students in the study's sample with percentage (40.0%) are success the test in section number 2 ***(Choose the words below that best complete the sentences in the text:)*** There are (90) persons with percentage (60.2 %) are failure.

Table (6) the frequency and percentage distribution of the students according to section (3)

Valid	Frequency	Percentage
Success	54	36
Failure	96	64
Total	150	100

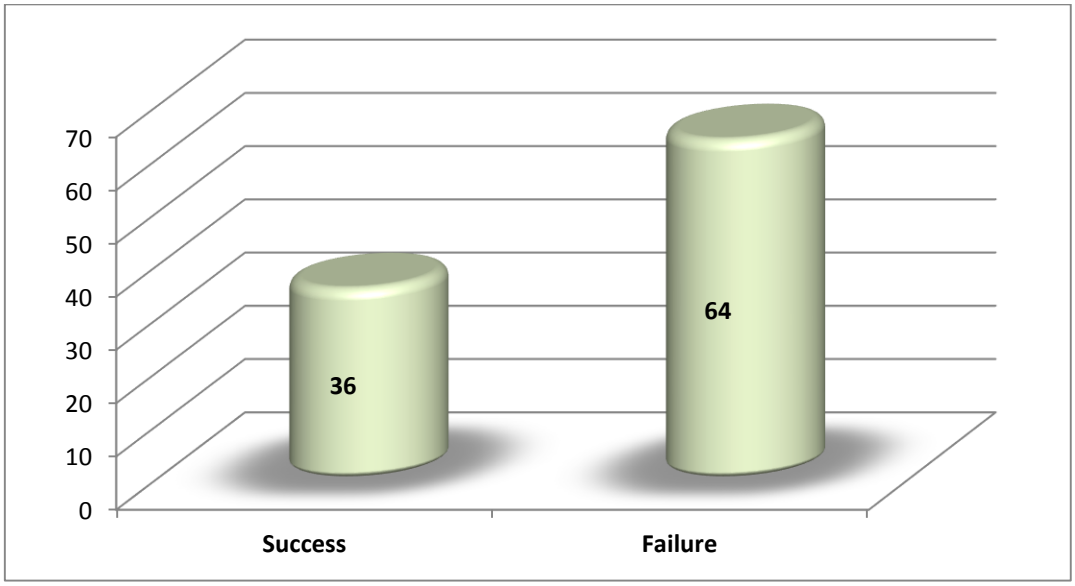


Figure (6)

from the above table No.(6) and figure No (6) its shown that there are (54) students in the study's sample with percentage (36.0%) are success the test in section number 3 ***(form words according to their position on the sentences).***There are (96) persons with percentage (64.0 %) are failure

Table (7) one sample T-TEST for the questions of the study

Sections	N	mean	SD	t-value	DF	p-value
1	150	3.6	0.2	14.5	149	0.002
2	150	2.7	1.81	17.1	149	0.001
3	150	3.4	2.44	7.17	149	0.012
For all	150	6.33	4.03	15.50	149	0.032

The calculated value of T – TEST for the significance of the differences for the respondent's answers in the section No (1) was (14.5) which is greater than the tabulated value of T – TEST at the degree of freedom (149) and the significant value level (0.05%) which was (2.34). this indicates that, there is statistically significant differences at the level (0.05 %) among the answers of the respondents . this mean that our hypothesis is accepted .

The calculated value of T – TEST for the significance of the differences for the respondent's answers in the section No (2) was (17.1) which is greater than the tabulated value of T – TEST at the degree of freedom (149) and the significant value level (0.05%) which was (2.34). this indicates that, there is statistically significant differences at the level (0.05 %) among the answers of the respondents . this mean that our hypothesis is accepted .

The calculated value of T – TEST for the significance of the differences for the respondent's answers in the section No (3) was (7.17) which is greater than the tabulated value of T – TEST at the degree of freedom (149) and the significant value level (0.05%) which was (2.34). this indicates that, there is statistically significant differences at the level (0.05 %) among the answers of the respondents. This means that our hypothesis is accepted.

3.7 Why University Students in Particular

The researcher focuses on university students in terms of the following points:

1- Most of the on-line resources are available in English. This availability may give advantages to students of English to be exposed a variety of resources and materials.

2- Students at four-level are expecting to cover all areas necessary to be a professional level, since web resources sometimes are occupied with sophisticated language and required a good command of English for better understanding.

3- Sometimes university students are required to provide their dissertation and assignments with quotations from the web.

4- Students are expected to be skillful in surfing the net, down loading pages and make the retrieved pages available off-line.

5- Students are to be up-dated with participating on-line discussion and collaborative projects.

6- Students are encouraged to be part of the dynamic global changes and practices.

7- Students have acquired the necessary English skills to communicate via sophisticated means of technology represented in e-mail and other media.

3.8 Why the Use of Web-Based Learning (WBL)

The researcher adopted Web-based Learning as a new media of delivering instruction, based on the following points:

1- The World Wide Web (www) has a huge impact on the process of English teaching and learning as a tool. The fact behind that (www) is full of information, material and resources which can be accessed and used in the classroom to provide students with authentic materials for real and genuine communication practices.

2- One of the most amazing resources is the existence of on-line dictionaries and encyclopedias which provide students with amazing

opportunities to tackle their own reading barriers especially when they are reading a text with so unfamiliar words.

3- E-mail exchange between EFL students and their teachers can initiate communication and healthy interaction inside and outside classes. A result, students may develop their overall language proficiency and cultural awareness.

3.9 Limitation of the Study

This study is carried out university teachers and EFL university students to investigate how Web-based Learning (WBL) enhances undergraduates' English language learning and vocabulary. During the years of the study, the EFL university students and English teachers were actively involved in the investigation of the facts related to the study.

There were some limitations in this study. First, the choice of the participations who involved both EFL teachers currently teaching English in Sudan University of Science and Technology (SUST) and EFL students enrolled in the fourth level at the same university who study English language. Only 120 English teachers and 150 University students were selected. The aim of smaller size was to ease data collection and analysis.

The second limitation is related to the questionnaire and the test as data collection tools.

Summary of the Chapter

Throughout this chapter the researcher provided detailed description for the teachers' questionnaire about the study sample in items of qualification, gender and the teaching level. The teacher and student respondents were also mentioned. The data for the study were collected from two groups, the teachers who responded to the questionnaire (120 EFL teachers) and the undergraduates who responded to the test (150 EFL learners). The both tools (test and questionnaire) were carefully checked, numbers of referees who added some comments that were seriously considered to re-developed both of them.

In the next chapter, the findings from the data analyzed will be presented and discussed.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents the analysis of data obtained from experiment, pre-test, post-test and teachers' questionnaire. Population and sample are described. Reliability and validity of the study tool are also shown.

4.1 Analysis of the Experiment

The analysis of the experiment will focus on answering vital questions on web-based learning and its effects on English learning effect on the overall standards of the students and knowledge of English. To answer these questions, we computed the mean, standard deviation, standard error and ranges for the pretest- and post-test scores of both experimental and control groups. T-test was computed to find out whether each group had made any progress as a direct result of instruction. The following three hypotheses will be verified or confirmed in view of the analysis of the diagnostic test, Discourse Completion Test (DCT) as well as the questionnaire for the tutors.

4.2 Test in the Study Hypotheses

To answer the study's questions and hence verify its hypotheses, the median will be computed for each question from the diagnostic test, vocabulary Completion Test as well as the questionnaire that shows the opinions of the study respondents about the problem in question, namely to investigate the web-based learning as tool to enhance learning English language for EFL learners. To accomplish this task five degrees for each answer "strongly agree", four degrees for each answer "agree", three degrees for each answer " neutral", two degrees with each answer "disagree", and one degree for each answer with "strongly disagree" will be given. This means, in accordance with the statistical analysis requirements, transformation of nominal variables to quantitative variables. After that, we will use the non-parametric chi-square test to know if there are statistical differences amongst the respondents' answers about hypotheses questions. The hypotheses to be tested are as follows:

1. Students and tutors have a positive attitude towards the use of the internet as a useful learning tool.

2. The application of ICT tools enhance English language teaching and learning in an EFL classroom.

3. Sudanese educational policymakers and educators are convinced with the benefit of the internet as a useful tool of learning.

1.6 Research Questions

1. To what extent do students and tutors view positively the incorporation of the internet into Sudanese classroom settings?

2. What are the expected barriers that hinder Sudanese learners from adopting the internet in their learning settings?

3. To what extent are Sudanese educational policymakers and experts convinced with the benefit of the internet as a learning tool?

To make the most of classroom interaction certain language material was chosen for conducting the diagnostic as well as the DCT, as the outcome of the two tests will also give insights into the type of teaching material to be used to enhance classroom interaction. The material was taken from the internet as this web-based learning, students' syllabus and other resources. As far as the diagnostic test is concerned, the first question was intended to check the students' vocabulary as regards cultural knowledge of native speakers. The following is the analysis in relation to:

(i)Statistical Reliability and validity for students' test

The reliability coefficient was calculated for the measurement, which was used in the test using Alpha - Cronbach coefficient Equation as the following:

For calculating the validity and the reliability of the test from the above equation, the researcher distributed the test to respondents to calculate the reliability coefficient using the Alpha-Cronbach coefficient the results have been showed in the following table

	Reliability	***validity***	***N***
ALPH – CRONBACH	0.89	0.93	

$$\text{Validity} = \sqrt{\text{Reliability}}\ .$$

From the above table it's shown that the validity of the test is very high (0.93). This indicates that if we repeat the test we are sure with 93% that it's going to give us the same results.

Table (4.2) the frequency and percentage distribution of the students according to section (1)

Valid	Frequency	Percentage
Success	95	63.3
Failure	55	36.7
Total	150	100

From the above table No.(4.2) and figure No (4.2) it's shown that there are as many as (95) students in the study's sample with percentage (63.2 %) have managed to produce the right answer in section number 1 (*Choose the meaning of underlined words or phrases from the given four alternatives*) . There are (55) persons with percentage (have failed)

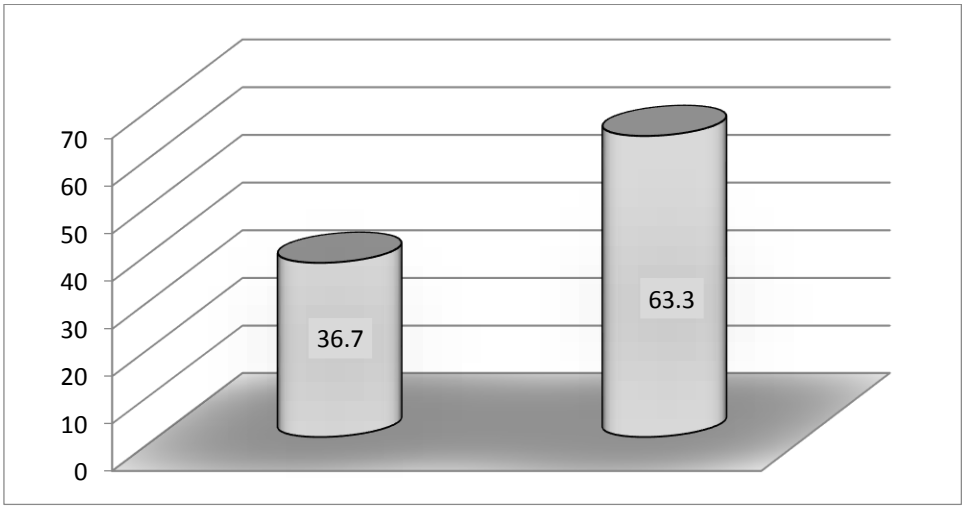


Figure (4.2)

Nonstandard test items were more difficult for students to answer correctly than the standard test items, provided no enhanced ability to discriminate between higher- and lower-performing students, and resulted in poorer student performance. Item-writing guidelines should be considered during test construction.

Table (4.3) the frequency and percentage distribution of the students according to section (2)

Valid	Frequency	Percentage
Success	90	60
Failure	60	40
Total	150	100

from the above table No.(4.3) and figure No (4.3) it's shown that there are (90) students in the study's sample with percentage (60.0%) are success the test in section number 2 ***(Choose the words below that best complete the sentences in the text:)*** There are (60) persons with percentage (40.2 %) are failures.

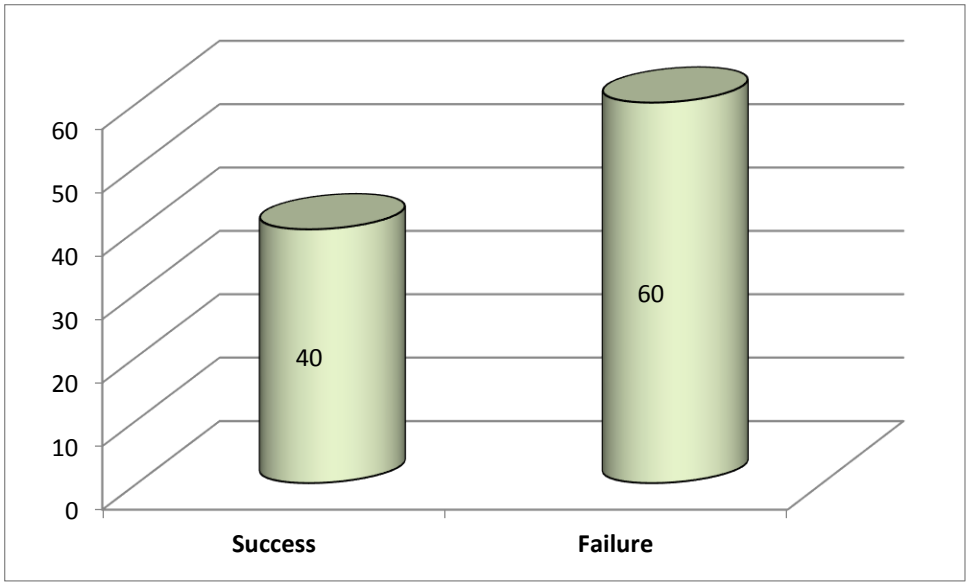


Figure (1)

The students ‘performance on this section is noticeably better than any other sections. This is due to the fact that multiple choice questions—also known as fixed choice or selected response items—require students to identify right answers from among a set of possible options that are presented to them. Possible answers are "fixed" in advance rather than left open for the learner to generate or supply.

The advantage of these items is that they can be scored rapidly, providing quick feedback to students and enabling efficient ways to assess large numbers of students over a broad range of content. One drawback is that constructing good multiple-choice items takes time, especially if you are writing questions to test higher order thinking.

Table (4.4) the frequency and percentage distribution of the students according to section (3)

Valid	Frequency	Percentage
Success	96	64
Failure	54	36
Total	150	100

from the above table No.(4.4) and figure No (4.) its shown that there are (96) students in the study's sample with percentage (46.0%) are success the test in section number (3) ***(Choose the words below that best complete the sentences in the text)*** .There are (54) persons with percentage (36.0 %) are failure

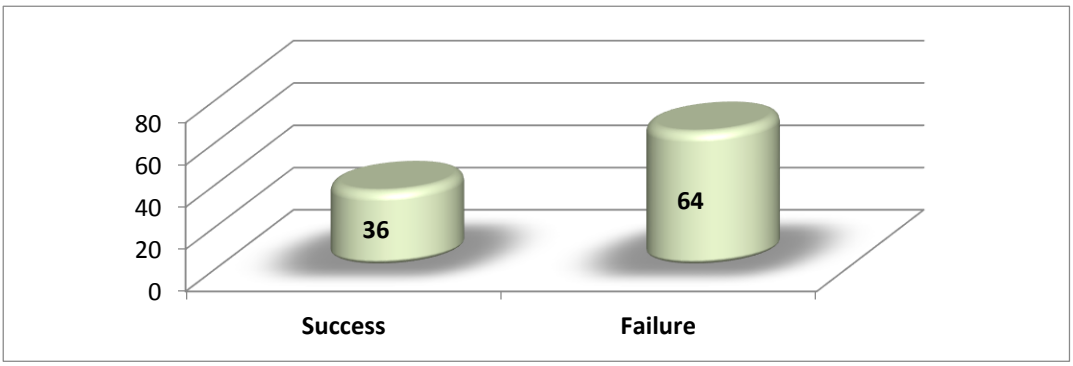


Figure (2)

Table (5) one sample T-TEST for the questions of the study

Sections	N	mean	SD	t-value	DF	p-value
1	150	3.6	0.2	14.5	149	0.002
2	150	2.7	1.81	17.1	149	0.001
3	150	3.4	2.44	7.17	149	0.012
For all	150	6.33	4.03	15.50	149	0.032

The calculated value of T – TEST for the significance of the differences for the respondent's answers in the section No (1) was (14.5) which is greater than the tabulated value of T – TEST at the degree of freedom (149) and the significant value level (0.05%) which was (2.34). this indicates that, there is statistically significant differences at the level (0.05 %) among the answers of the respondents . this mean that our hypothesis is accepted .

The calculated value of T – TEST for the significance of the differences for the respondent's answers in the section No (2) was (17.1) which is greater than the tabulated value of T – TEST at the degree of freedom (149) and the significant value level (0.05%) which was (2.34). this indicates that, there is statistically significant differences at the level (0.05 %) among the answers of the respondents . this mean that our hypothesis is accepted .

The calculated value of T – TEST for the significance of the differences for the respondent's answers in the section No (3) was (7.17) which is greater than the tabulated value of T – TEST at the degree of freedom (149) and the significant value level (0.05%) which was (2.34). this indicates that, there is statistically significant differences at the level (0.05 %) among the answers of the respondents . this mean that our hypothesis is accepted .

4.3 Analysis of the Questionnaire

This chapter is devoted to the analysis, evaluation, and interpretation of the data collected through the questionnaire which was given to 120 respondents who represent the EFL teacher's community in Sudan University of Science and Technology.

(i) The Responses to the Questionnaire

The responses to the questionnaire of the 120 teachers were tabulated and computed. The following is an analytical interpretation and discussion of the findings regarding different points related to the objectives and hypotheses of the study.

Each item in the questionnaire is analyzed statistically and discussed. The following tables and figures will support the discussion.

(ii) **Analysis of the Questionnaire:**

A number of questionnaire forms have been distributed to the determined study sample (120), and constructed the required tables for collected data. This step consists transformation of the qualitative (nominal) variables (strongly disagree, disagree, agree, and strongly agree) to quantitative variables (1, 2, 3, 4,) respectively, also the graphical representations were used for this purpose.

(iii) Statistical Reliability and Validity:

Reliability refers to the reliability of any test, to obtaining the same results if the same measurement is used more than one time under the same conditions. In addition, the reliability means when a certain test was applied on a number of individuals and the marks of every one were counted; then the same test applied another time on the same group and the same marks were obtained; then we can describe this test as reliable. In addition, reliability is defined as the degree of the accuracy of the data that the test measures. Here are some of the most used methods for calculating the reliability:

Alpha-Cronbach coefficient.

On the other hand, validity also is a measure used to identify the validity degree among the respondents according to their answers on certain criterion. The validity is counted by a number of methods, among them is the validity using the square root of the (reliability coefficient). The value of the reliability and the validity lies in the range between (0-1). The validity of the questionnaire is that the tool should measure the exact aim, which it has been designed for.

In this study the validity calculated by using the following equation:

$$\text{Validity} = \sqrt{\text{Reliability}}$$

The reliability coefficient was calculated for the measurement, which was used in the questionnaire using Alpha-Cronbach coefficient Equation as the following:

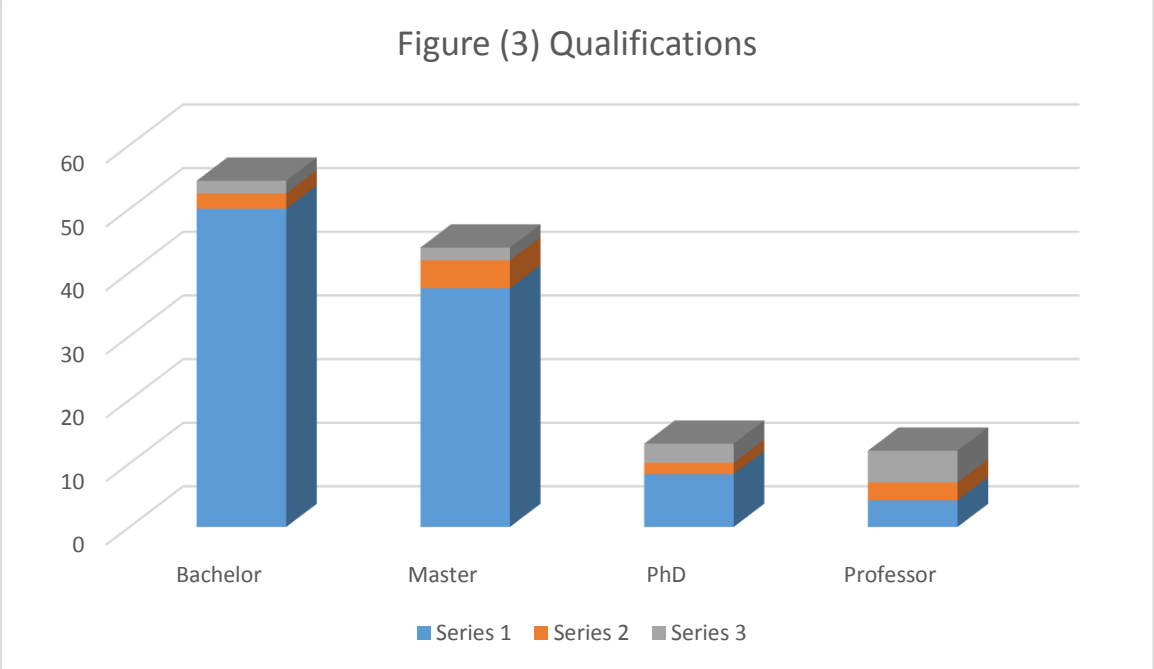
For calculating the validity and the reliability of the questionnaire from the above equation, the researcher distributed (20) questionnaires to respondents to calculate the reliability coefficient using the Alpha-Cronbach's coefficient; the results have been showed in the following table.

Table (6) Calculated results of reliability coefficient

Scale	Validity	Reliability	Number of items
Alpha – cronbach	**0.88**	**0.94**	**15**

Table No (7) The Frequency Distribution for the Respondents' Answers of the respondents according to their qualifications:

Valid	Frequency	Percentage%
Bachelor	60	50
Master	45	37.5
PhD	10	8.3
Professor	5	4.2
Total	**120**	**100**



From the above table (8) and figure (3) it's clear that most of study sample (60) persons with percent (50.%) have university degree Bachelorand (45) persons with (37.5%) have master degree, also (10) persons with (8.3) are PhD holders also (5) persons with (4.2) have professor degree.

Section Two

Table (9) shows the frequency distribution according to the question (I Communicate via Internet)

Valid	Frequency	Percentage%
everyday	80	66.7
two days a week	22	18.3
three days a week	13	10.8
never communicate	5	4.2
Total	**120**	**100**

This confirms the first hypothesis which states that: **Students and tutors have a positive attitude towards the use of the internet as a useful learning tool.**

Table (10) shows the frequency distribution according to the statement (I Communicate via short messages (no need for quick response)

Valid	Frequency	Percentage%
participating in discussion forums	50	41.7
keeping blogs	49	40.8
participating in public/private chat	15	12.5
Other	6	5
Total	**120**	**100**

Table (11) shows the frequency distribution according to the statement (Online communication you take part in is mostly related to (you can choose several options)

Valid	Frequency	Percentage%
work	40	33.3
academic issues	70	58.3
leisure topics	5	4.2
Others	5	4.2
Total	**120**	**100**

Table (12) shows the frequency distribution according to the statement (. What kind of English do you usually use while communicating online?

Valid	Frequency	Percentage%
Formal	30	25
Informal	20	16.7
Both	70	58.3
Total	**120**	**100**

Table (13) shows the frequency distribution according to the statement Do you use ICT tools in your teaching??

Valid	Frequency	Percentage%
always	55	45.8
sometimes	30	25
rarely	15	15.5
Never	20	16.7
Total	**120**	**100**

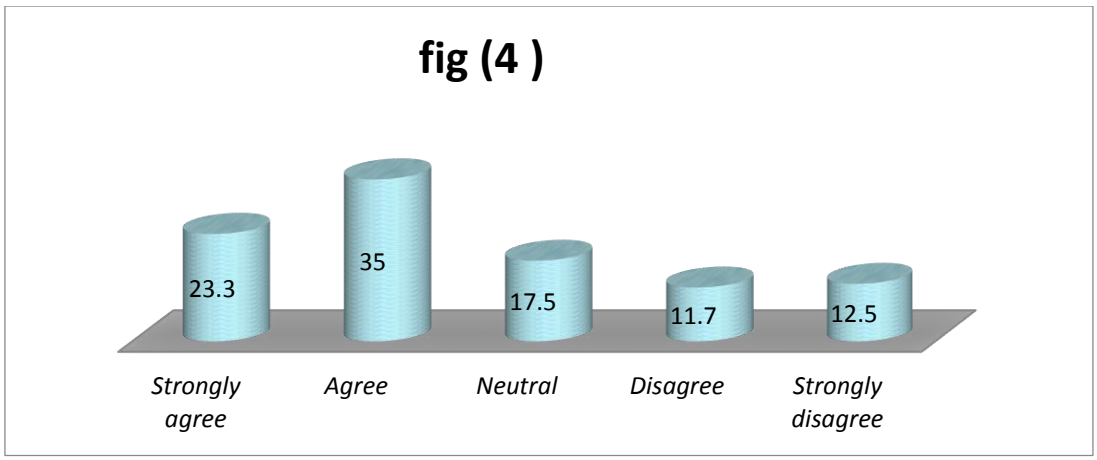
Statement No (1)*Computer knowledge is important to an English teacher particularly in maximizing their vocabularies*.

Table No (14) The Frequency Distribution for the Respondent's Answers of Statement No. (1).

Variables	Frequency	Percentage%
Strongly agree	28	23.3
Agree	42	35.0
Neutral	21	17.5
Disagree	14	11.7
Strongly disagree	15	12.5
Total	**120**	**100**

It is clear from the above table No. (14) and figure No (4) that there are (28) persons in the study's sample with percentage (23.3%) strongly agreed with " Computer knowledge is important to an English teachers.". There are (42) persons with percentage (35.0%) agreed with that, and (21) persons with percentage (17.5%) were not sure that, and (14) persons

with percentage (11.7%) disagreed. and (15) persons with 12.5% are strongly disagree



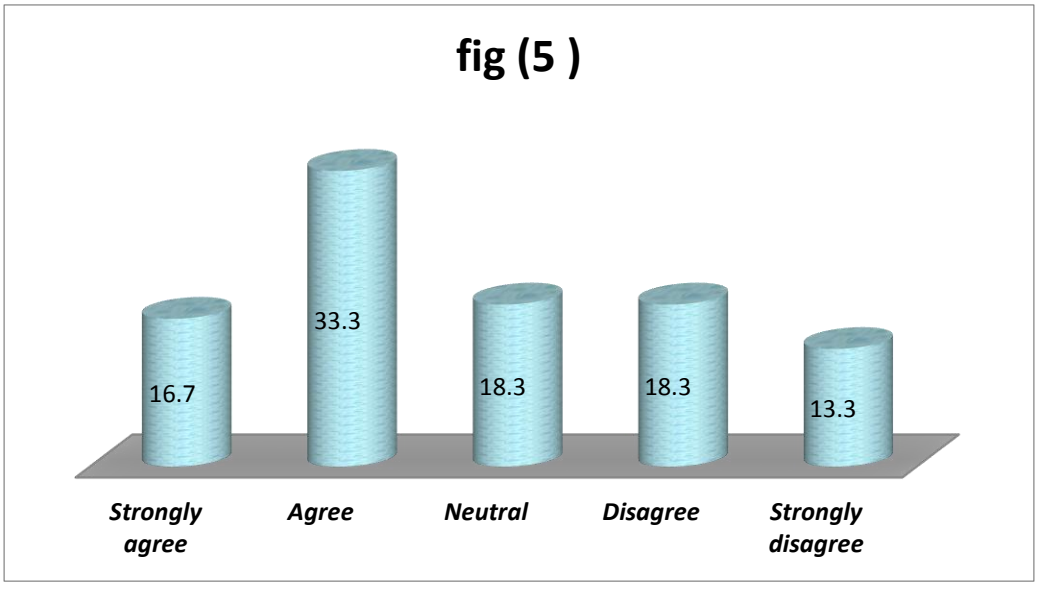
The Internet is entered the life of humankind in the 20th century. It has become the most rapid means of communication. People from different countries have got an opportunity to communicate with each other in quite a short time. Those who study at schools, universities, and colleges can enhance their knowledge by using the educational literature, encyclopedia, references, dictionaries, data bases, etc. which are freely accessed through Internet. For most students who learn a second language, the first difficulty meet is usually remembering words. Vocabulary is an important part of language. Wilkins (1972) states that "While without grammar very little can be conveyed, without vocabulary nothing can be conveyed". But unfortunately students sometimes don't speak or write properly, because of their poor vocabulary knowledge. Lewis (1993) states "Lexis is the core or heart of language. Vocabulary is central to English language teaching and learning,because without sufficient vocabulary learners can't understand others or express their own ideas Nagy (1989: p-107) states "Vocabulary knowledge is fundamental to reading comprehension, one can't understand a text without knowing what most of the words mean. Increasing vocabulary knowledge is a basic part of the process of education both as means and an end.

Statement No. (2):*ICT tools enhance English language teaching and learning in an EFL classroom.*

Table No (15) The Frequency Distribution for the Respondent's Answers of Statement No.(2)

Valid	Frequency	Percentage%
Strongly agree	20	16.7
Agree	40	33.3
Neutral	22	18.3
Disagree	22	18.3
Strongly disagree	16	13.3
Total	**120**	**100**

it is clear from the above table No.(15) and figure No (5) that there are (20) persons in the study's sample with percentage (16.7%) strongly agreed with "*ICT tools enhance English language teaching and learning in an EFL classroom*.". There are (40) persons with percentage (33.3%) agreed with that, and (22) persons with percentage (18.3%) were not sure that, and (22) persons with percentage (18.3%) disagreed. and (16) persons with 13.3% are strongly disagree



This confirms the second hypothesis which indicates that **the application of ICT tools enhance English language teaching and learning in an EFL classroom.** Though it was proved in a number of studies across the globe that the use of the internet in classroom settings is likely to bring

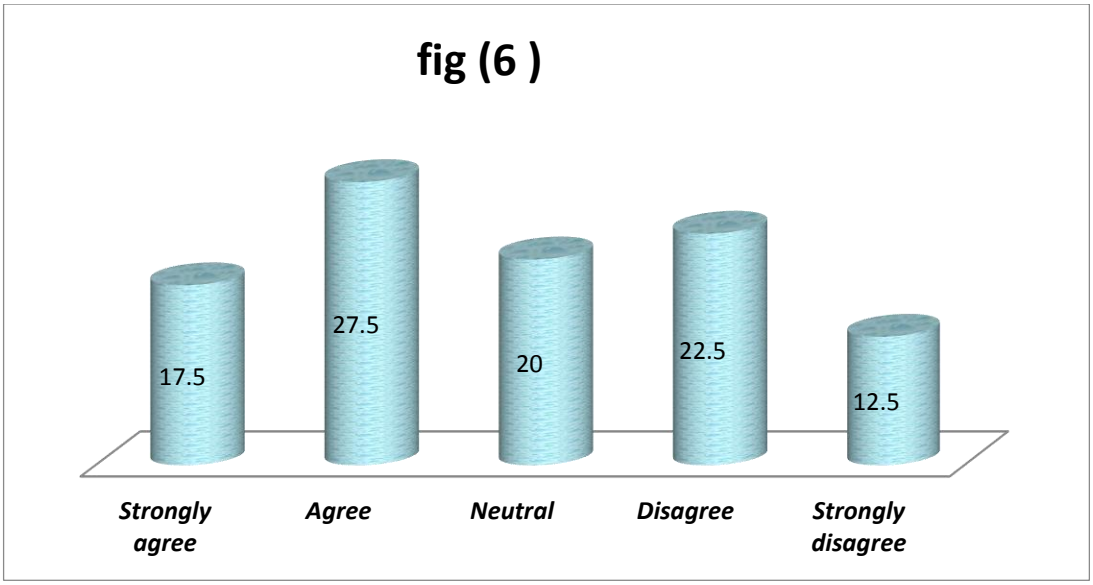
about positive result in learning, it is still lagging behind in our classrooms. This is attributable to the fact it is financial costly to fit the entire classroom with internet. However, there can be a lab for all the school where students can attend classes in turn.

Statement No. (3): Students will learn more when information is adopted by a variety of learning channels than when only a single channel of learning is used.

Table No (16) The Frequency Distribution for the Respondent's Answers of Statement No.(6)

Valid	Frequency	Percentage%
Strongly agree	21	17.5
Agree	33	27.5
Neutral	24	20.0
Disagree	27	22.5
Strongly disagree	15	12.5
Total	**120**	**100**

it is clear from the above table No.(16) and figure No (6) that there are (21) persons in the study's sample with percentage (17.5%) strongly agreed with " Students will learn more when information is adopted by a variety of learning channels than when only a single channel of learning is used. ". There are (33) persons with percentage (27.5%) agreed with that, and (24) persons with percentage (20.0%) were not sure that, and (27) persons with percentage (22.5%) disagreed. and (15) persons with112.5% are strongly disagree.



This confirms the second hypothesis as long as it emphasizes the use of the internet for enhancing learning through exposing our learners to different channels and different modes of learning.

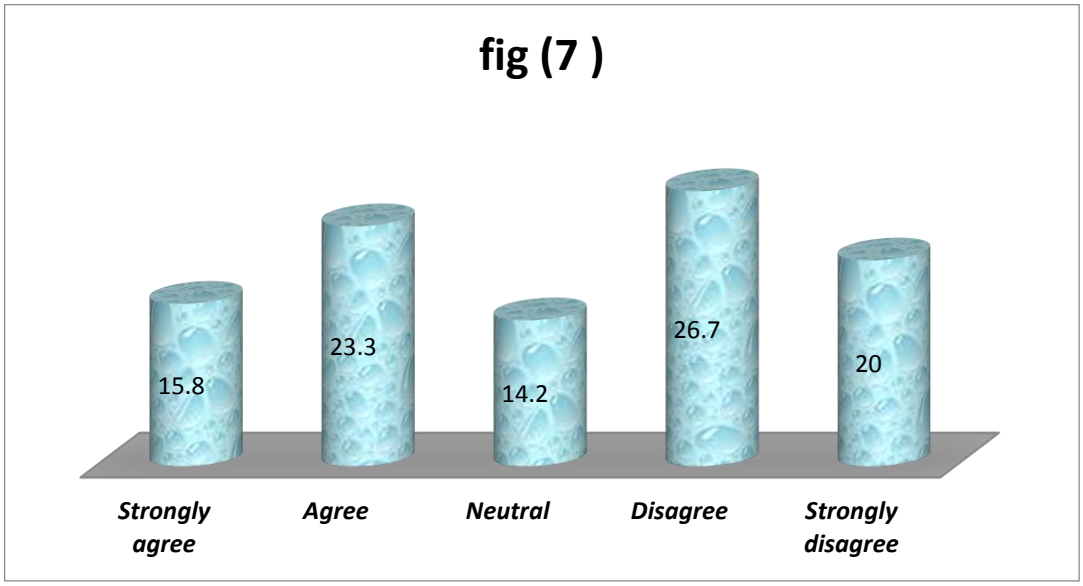
Statement No. (4)*I like to see Internet incorporating into Sudanese classroom.*

Table No (12) The Frequency Distribution for the Respondent's Answers of Statement No. (5)

Variable	Frequency	Percentage%
Strongly agree	19	15.8
Agree	28	23.3
Neutral	17	14.2
Disagree	32	26.7
Strongly disagree	24	20.0
Total	**120**	**100**

it is clear from the above table No.(17) and figure No (7) that there are (19) persons in the study's sample with percentage (15.8%) strongly agreed with "*I like to see Internet incorporating into Sudanese classroom.* ". There are (28) persons with percentage (23.3%) agreed with that, and (17) persons with percentage (14.2%) were not sure that, and (32) persons with percentage (26.7%) disagreed. and (24) persons with120.0% are strongly disagree.

This confirms the third hypothesis which states that ***Sudanese educational policymakers and educators are convinced with the benefit of the internet as a useful tool of learning.*** All classroom practitioners as well as the students arewell aware of the benefits of the internet in classrooms. Traditional learning as represented with *chalk and talk* has started to give way to the modern learning that is enormously characterized as web-based.

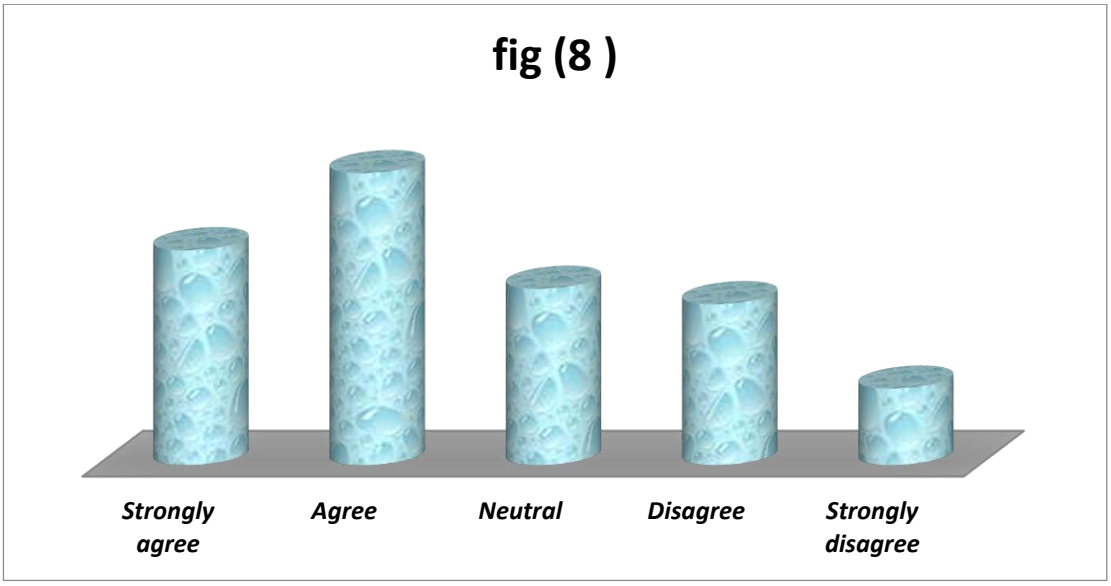


There are few ones who stood so obstinately against the incorporation of the internet either because of their inability to use the **internet** so they ignore the huge benefits that are likely to accrue from using such tool. Some educators still cherish the concept that an internet can be a tool of corruption and likely to divert students from learning and hence as a greater negative effect.

Statement No. (5) I don't have any objections to using the internet if I have received the proper training for incorporating it in my classroom.

Table No (18) The Frequency Distribution for the Respondent's Answers of Statement No.(5)

Valid	Frequency	Percentage%
Strongly agree	28	25.0
Agree	38	23.3
Neutral	23	19.2
Disagree	21	25.8
Strongly disagree	10	6.7
Total	**120**	**100**



It is clear from the above table No.(18) and figure No (8) that there are (28) persons in the study's sample with percentage (25.0%) strongly agreed with . *"I don't have any objections to using the internet if I have received the proper training for incorporating it in my classroom* ". There are (38) persons with percentage (23.3%) agreed with that, and (23) persons with percentage (19.2%) were not sure that, and (21) persons with percentage (25.8%) disagreed. and (10) persons with16.7% are strongly disagree.

This again confirms the third hypothesis but reflects something about the Sudanese personality with the tendency not to be risky and get involved into an affair of which they know very little. The internet is self-

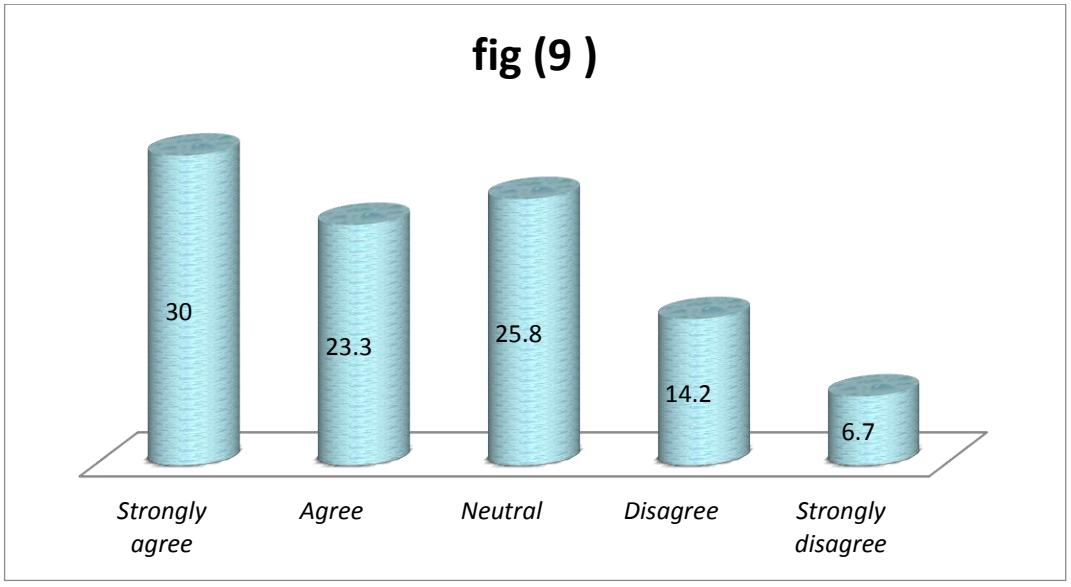
explanatory and any one can develop by depending on one's own personal efforts and talents.

Statement No (6) Internet promote students' motivation for learning.

Table No (19) The Frequency Distribution for the Respondent's Answers of Statement No. (6)

Variable	Frequency	Percentage%
Strongly agree	36	30.0
Agree	28	23.3
Neutral	31	25.8
Disagree	17	14.2
Strongly disagree	8	6.7
Total	**120**	**100**

It is clear from the above table No. (19) and figure No (9) that there are (36) persons in the study's sample with percentage (30.0%) strongly agreed with "*Internet promote students' motivation for learning*. " There are (28) persons with percentage (23.3%) agreed with that, and (31) persons with percentage (25.8%) were not sure that, and (17) persons with percentage (14.2%) disagreed and (8) persons with16.7% are strongly disagree.



The use of computers can help students to do different language learning tasks and can help create interest and cooperation between peers in the classroom.A very important contribution made for language teaching is the addition of CALL (Computer-Assisted language learning) into the methods of language learning and teaching. It is obvious from its terms that method entails how the computer can be used to help language learners improve their understanding of language. The free Computer-assisted language learning (CALL) is the term which refers to any language learning activity involving a computer in significant role, including both tutor and tools uses.

Levy (1997) puts CALL into interdisciplinary context including psychology, applied, computational. Linguistics, instructional technology and design Encyclopedia traces the history of CALL as dated back to 1960s when software developers started to integrate computer into teaching and learning. In order to show the benefits of CALL in language teaching and how it can create learner's autonomy, Mutlu, (2013) states:

> " Computer-assisted language learning (CALL) ,…has been significant development in language teaching and learning …this information and communication technology encourages learners to share their learning experiences and to build upon their previous knowledge and therefore provides an appropriate framework for learners to understand, how learners become independent in learning".

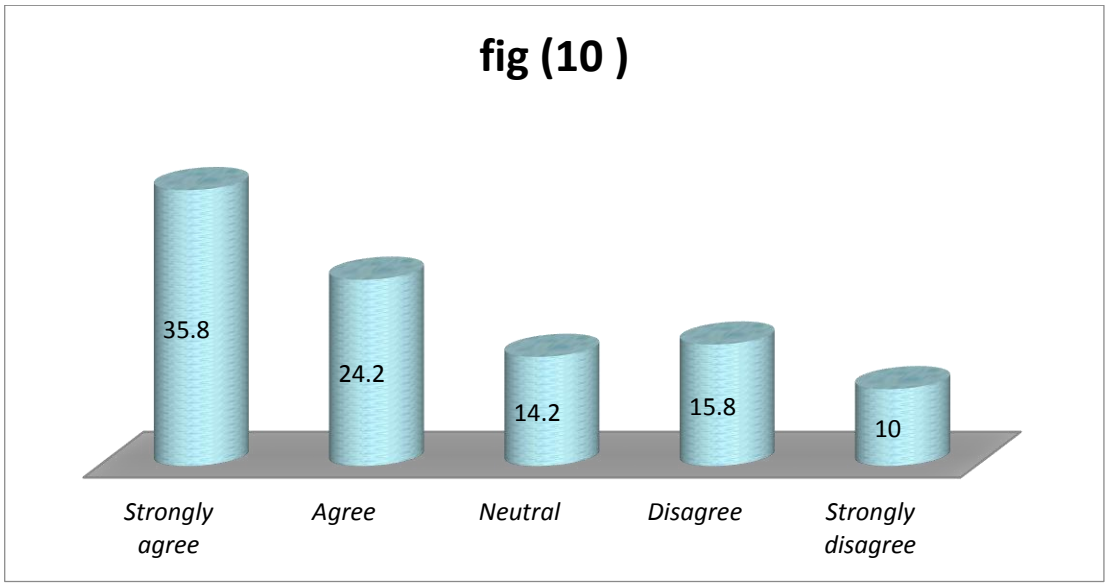
This further creates the third hypothesis which revolves around the use of technology as a motivating tool which promotes students creativity. Even if students use their devices for fun, there is a kind of learning after all.

Statement No. (7): Using web-based learning in teaching cancels English teacher's role.

Table No (20) The Frequency Distribution for the Respondent's Answers of Statement No.(7)

Variable	Frequency	Percentage%
Strongly agree	43	35.8
Agree	29	24.2
Neutral	17	14.2
Disagree	19	15.8
Strongly disagree	12	10
Total	**120**	**100**

Judging by the table above, it is clear that there are (43) persons in the study's sample with percentage (35.8%) strongly agreed with "*Using web-based learning in teaching cancel English teacher's role.*". There are (29) persons with percentage (24.2%) agreed with that, and (17) persons with percentage (14.2%) were not sure that, and (19) persons with percentage (15.8%) disagreed. and (12) persons with110.0% are strongly disagree.



Making use of ICT when learning a language at the beginning of twenty-first century is, for most members of fluent society, an obvious normal course of action. Just as technology has become woven into the everyday life, so language study has come to rely on forms of technological enhancement from audio and video recording to World Wide Web (www)

resources. With each technological shift, each new software or hardware, new challenges are presented for teachers to improve delivery and enhance learning. Technology as is clearly manifested in web-based learning, never cancels the teacher's role. It even adds new responsibility on top of those teachers already shoulder. One such responsibility is that teachers have to be attentive all the time that students are dedicated to their work and not browsing the net for fun. So the teacher has to be a good observer as well as a vigilant eavesdropper.Marie Madeine (2007) states:

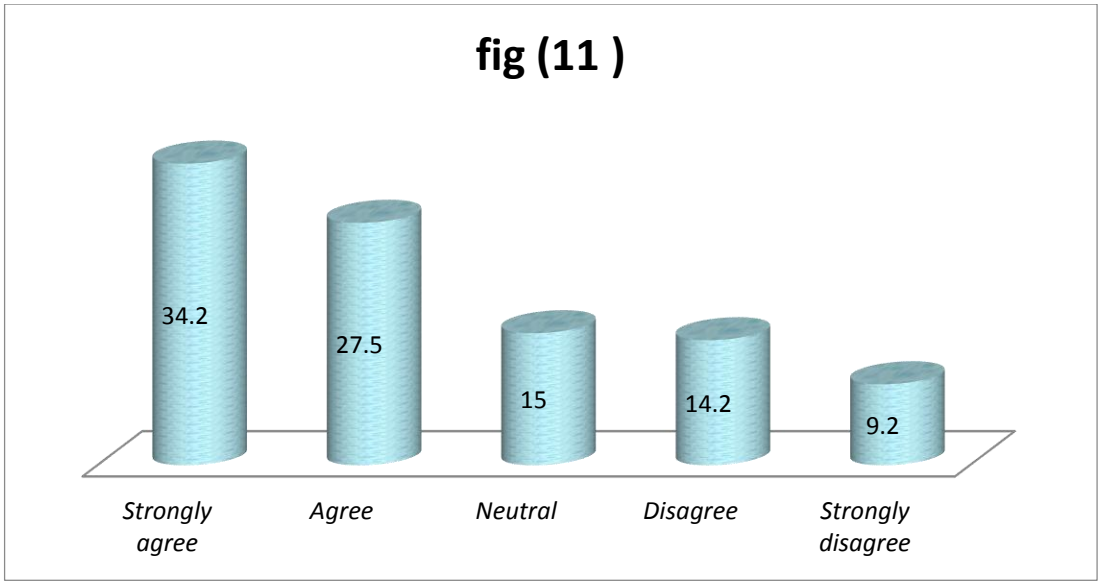
> "With spread of digital technologies the integration of ICT almost become a kind of normal imperative. It is appropriate that teaching and learning should reflect these profound changes and that we should take advantages of them to enhance teaching and learning and of course, to raise pupils' achievement".

Statement No. (8):*Using Internet outside the classroom gives students more autonomy in language learning.*

Table No (21) The Frequency Distribution for the Respondent's Answers of Statement No.(8)

Valid	Frequency	Percentage%
Strongly agree	41	34.2
Agree	33	27.5
Neutral	18	15.0
Disagree	17	14.2
Strongly disagree	11	9.2
Total	**120**	**100**

Looking at the above table No.(21) and figure No (11) that there are (41) persons in the study's sample with percentage (34.2%) strongly agreed with "Using Internet outside the classroom gives students more autonomy in language learning". There are (33) persons with percentage (27.5%) agreed with that, and (18) persons with percentage (15.0%) were not sure that, and (17) persons with percentage (14.2%) disagreed. and (11) persons with19.2% are strongly disagree.



Technology-enhanced language learning is a recent term for what has been growing in foreign language education and second language acquisition circles. Technology use and applications in language learning have progressed from listening to cassette tapes to on line interaction. While many researchers indicate that technology-enhanced language learning, can be effective tools for language learning (Black, 1998, Bush & Terry, 1997, McCarthy, 1994, Bueno, 2003). Technology integration in education today include tutorials, presentation, software, interactive multimedia, the Internet, the World Wide Web (WWW) and real time communication has changed the possible technology applications in the classroom and even outside the classroom where students' learning is no longer restricted to the classroom setting.

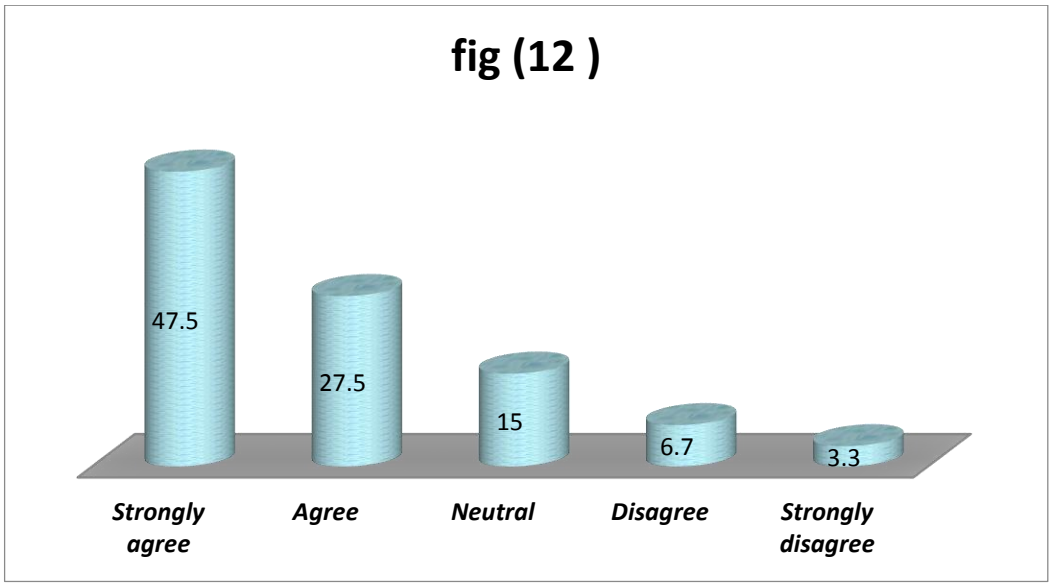
Students can quite independently outside the classroom and can choose the subject-matter and themes that interest them. This sort of freedom has the effect of maximizing their learning quite considerably so long as it's their own choice.

Statement No. (9)*Web-based Learning is an efficient approach to enhance and extend students' vocabulary*.

Table No (22) The Frequency Distribution for the Respondent's Answers of Statement No.(9)

Variables	Frequency	Percentage%
Strongly agree	57	47.5
Agree	33	27.5
Neutral	18	15.0
Disagree	8	6.7
Strongly disagree	4	3.3
Total	**120**	**100**

it is clear from the above table No.(22) and figure No (12) that there are (57) persons in the study's sample with percentage (47.5%) strongly agreed with "*Web-based Learning is an efficient approach to enhance and extend students' vocabulary*.". There are (33) persons with percentage (27.5%) agreed with that, and (18) persons with percentage (15.0%) were not sure that, and (8) persons with percentage (6.7%) disagreed. and (4) persons with13.3% are strongly disagree.



Web-based learning enhances students' vocabulary quite remarkably. Students have the opportunity to browse different websites and different types of jargons and registers. They can read news in English and chat with friends from different parts of the world.

Nowadays, all people have entirely depended on WWW to facilitate their activities and maintain social relationship. Professors and teachers bring flavor and taste into their classes by integrating online materials and activities and deviate from the limitations of the traditional knowledge found on the text books and references. WWW offers opportunities to make lessons appealing attractive, authentic and interactive. On the other hand, students of today are dying to investigate the different aspects of technology specially the Internet.

Chun & Plass, (2000,p.161) mention general capabilities of www features, that have the potential to enhance language learning. There are (a) The universal availability of authentic materials, (b) The communication capabilities through networking, (c) The multimedia capabilities and, (d) The nonlinear hypermedia structure of the information. WWW strongly enhance collaborative work by exposing students to authentic materials to develop their communicative competence and cultural awareness when participating in designing activities and project works. So, students are able to develop their thinking and cognitive process and become active participants.

Statement No.(10):*Internet facilitate meaningful interaction between students-teacher and students-students*.

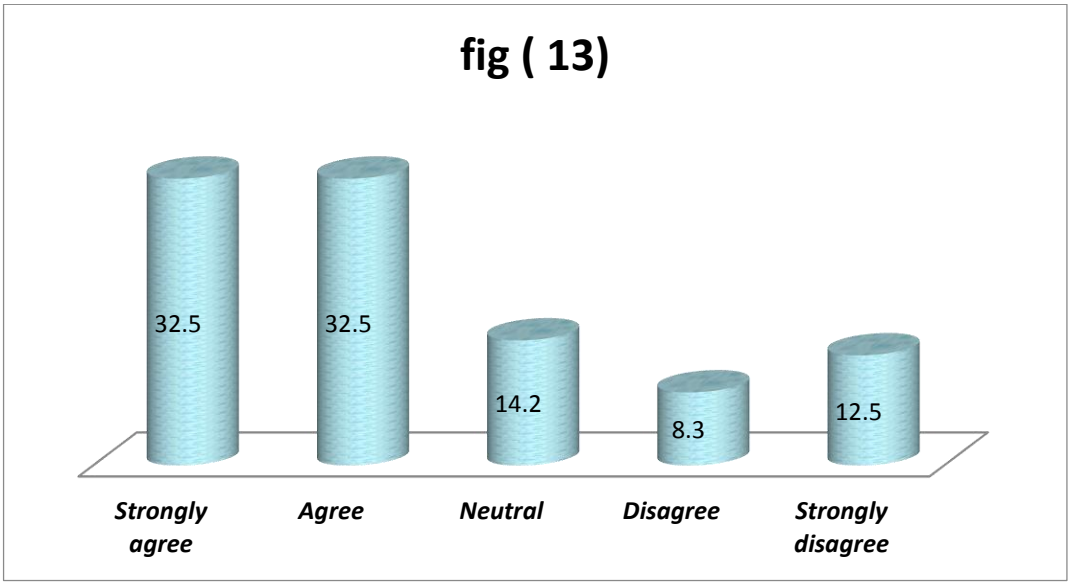
Table No (23) The Frequency Distribution for the Respondent's Answers of Statement No. (10)

Variable	Frequency	Percentage%
Strongly agree	39	32.5
Agree	39	32.5
Neutral	17	14.2
Disagree	10	8.3
Strongly disagree	15	12.5
Total	**120**	**100**

it is clear from the above table No.(23) and figure No (13) that there are (39) persons in the study's sample with percentage (32.5%) strongly agreed with " Internet facilitate meaningful interaction between students-teacher and students-students.". There are (39) persons with percentage

(32.5%) agreed with that, and (17) persons with percentage (14.5%) were not sure that, and (10) persons with percentage (8.3%) disagreed. and (15) persons with112.3% are strongly disagree.

The use of the Internet as a tool for communication in any kind of project whether in management or teaching institutes has greatly contributed to the success of any project. For this reason, various collaboration software, instant messaging programs, project management tools, and other social media have been used to supplement the communication needs of project teams. So, the *use of Internet facilitate meaningful interaction between students-teacher and students-students*.



Judging by the table and the figure almost 90% of the respondents agree to the variable stated above. Skype is one such tool of the most popular medium of communication in business as well as for personal use. For companies that need to meet with people who are located far from other parts of the world, the use of the Internet as a communication tool is helpful. With a video conferencing program like Skype, people in a meeting can see each other, hear each other and get instant responses just like a real meeting does. Skype is good for one-on-one interaction as well as with multiple people and can be done anywhere if using a smartphone or tablet. Skype can successfully be used in classrooms. Consequently, this further confirms the third hypothesis which states that

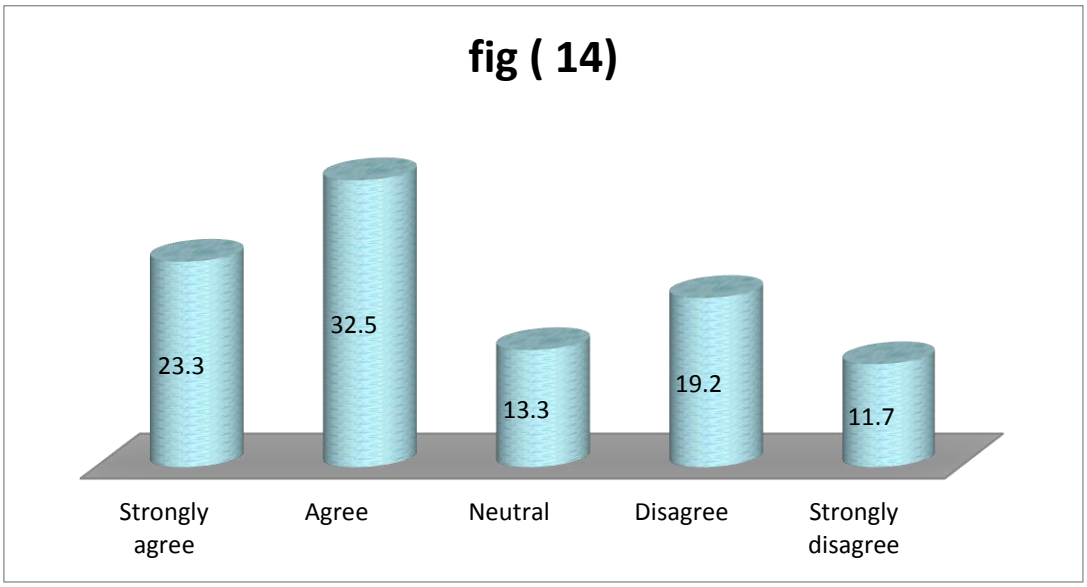
Sudanese educational policymakers and educators are convinced with the benefit of the internet as a useful tool of learning.

Statement No.(11): Watching video programs or movies in English is the most common self-initiated contextualized vocabulary learning activity.

Table No (23) The Frequency Distribution for the Respondent's Answers of Statement No.(13)

Valid	Frequency	Percentage%
Strongly agree	28	23.3
Agree	39	32.5
Neutral	16	13.3
Disagree	23	19.2
Strongly disagree	14	11.7
Total	**120**	**100**

It is clear from the above table No.(24) and figure No (14) that there are (28) persons in the study's sample with percentage (23.3%) strongly agreed with " Watching video programs or movies in English is the most common self-initiated contextualized vocabulary learning activity. ". There are (39) persons with percentage (32.5%) agreed with that, and (16) persons with percentage (13.3%) were not sure that, and (23) persons with percentage (13.3%) disagreed. and (14) persons with111.7% are strongly disagree.



In terms of communicating important project events and milestones, nothing beats the Internet as a tool for communication with its social

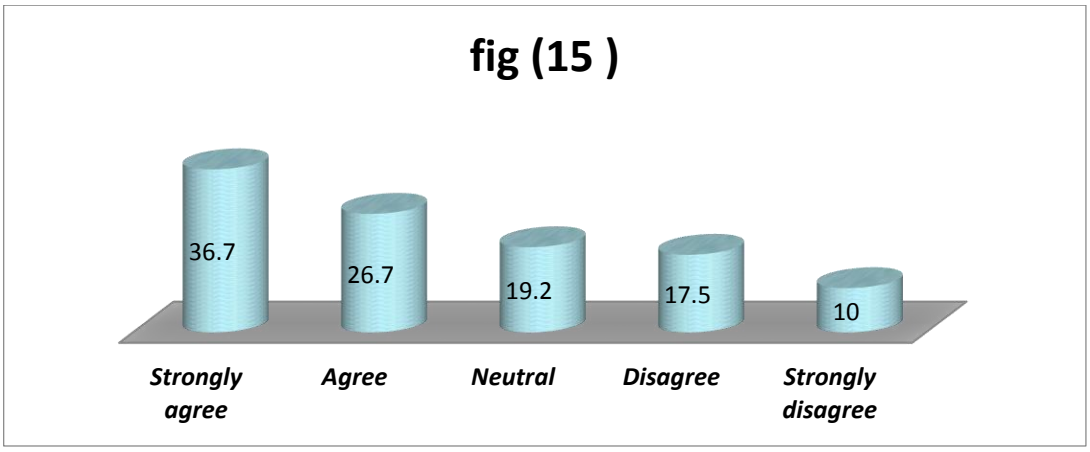
media sites, e.g., Twitter, Facebook , watching videos, games and the like. They are some of the ways to use the Internet as a communication tool. However, for internal project communication, you can use private social media tools such as Yammer, Bitrix, Jive, Blogtronix, Bloomfire, and more.

Statement No. (12):*It is necessary for teachers to encourage students to develop their own vocabulary strategies*.

Table No (25) The Frequency Distribution for the Respondent's Answers of Statement No. (12)

Valid	Frequency	Percentage%
Strongly agree	44	36.7
Agree	32	26.7
Neutral	23	19.2
Disagree	9	17.5
Strongly disagree	12	10.0
Total	**120**	**100**

It is clear from the above table No.(25) and figure No (15) that there are (44) persons in the study's sample with percentage (36.7%) strongly agreed with " It is necessary for teachers to encourage students to develop their own vocabulary learning strategies. ". There are (32) persons with percentage (26.7%) agreed with that, and (23) persons with percentage (19.2.3%) were not sure that, and (9) persons with percentage (17.5%) disagreed. and (12) persons with110.0% are strongly disagree.



Vocabulary knowledge is often viewed as a critical tool for second language learners because a limited vocabulary in a second language impedes successful communication. Underscoring the importance of vocabulary acquisition, Schmitt (2000) emphasizes that "lexical knowledge is central to communicative competence and to the acquisition of a second language".

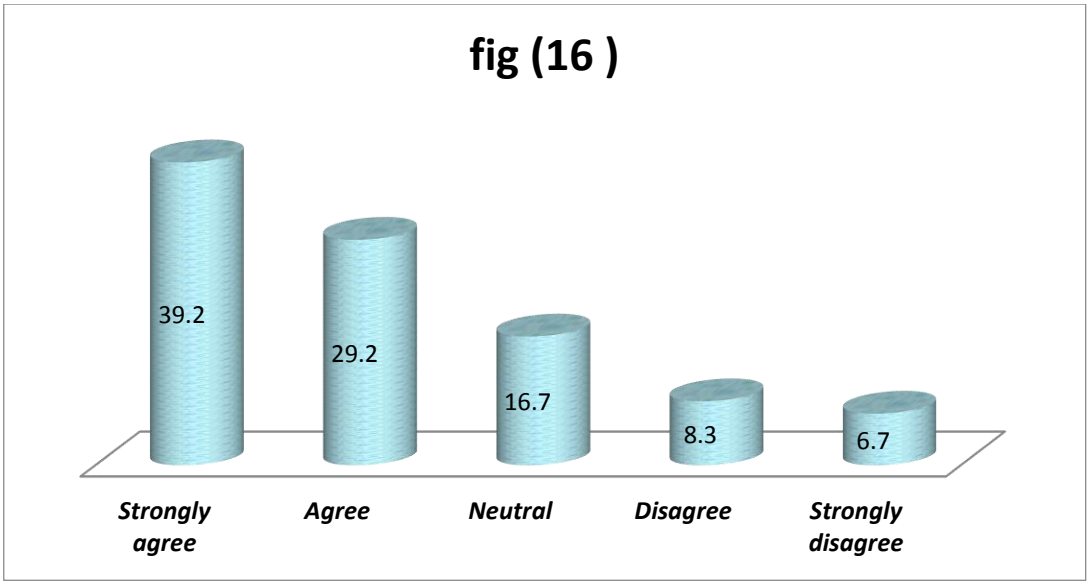
Nation (2001) further describes the relationship between vocabulary knowledge and language use as complementary: knowledge of vocabulary enables language use and, conversely, language use leads to an increase in vocabulary knowledge. The importance of vocabulary is demonstrating daily in and out the classroom. In classroom, the achieving students possess the most sufficient vocabulary. Therefore, *it is necessary for teachers to encourage students to develop their own vocabulary strategies*

Statement No. (13):*I think lack of computer training and digital skills hinder English language teachers from using them in teaching.*

Table No (26) The Frequency Distribution for the Respondent's Answers of Statement No.(13)

Valid	Frequency	Percentage%
Strongly agree	47	39.2
Agree	35	29.2
Neutral	20	16.7
Disagree	10	8.3
Strongly disagree	8	6.7
Total	**120**	**100**

It is clear from the above table No.(26) and figure No (16) that there are (47) persons in the study's sample with percentage (39.2%) strongly agreed with " I think lack of computer training and digital skills hinder English language teachers from using them in teaching. ". There are (35) persons with percentage (16.7%) agreed with that, and (20) persons with percentage (8.3%) were not sure that, and (10) persons with percentage (6.7%) disagreed. and (8) persons with110.0% are strongly disagree.



There are many factors facing teachers in their quest to implement computer technology in instruction. The factors affecting implementation and methods of implementation are examined in the context of the teachers' personal experiences in a school. "Microcomputers offer exciting approaches to teaching that were not even dreamed of twenty years ago, but the extent to which the educational potential of microcomputer technology will be realized remains to be seen. Some teachers will use microcomputers to revolutionize their classrooms. Perhaps you will be one of them." (Geisert and Futrell, 1995, p. xvii)

Geisert and Furtrell express the view of educators and parents about the promise computer technology have to achieve major educational reform. Bennet (1997) echoes Geisert and Futrell and offers an even more aspiringly detailed vision of the computer's potential in education: Today's technology, if used differently, could bring advances that would improve education dramatically. Ordinary students would make massive gains, and restraints on bright students would dissolve. So, *it is thought that lack of computer training and digital skills hinder English language teachers from using them in teaching.*Wherever illiteracy is a problem, it would be eliminated, and handicapped students would have vast new vistas opened to them.

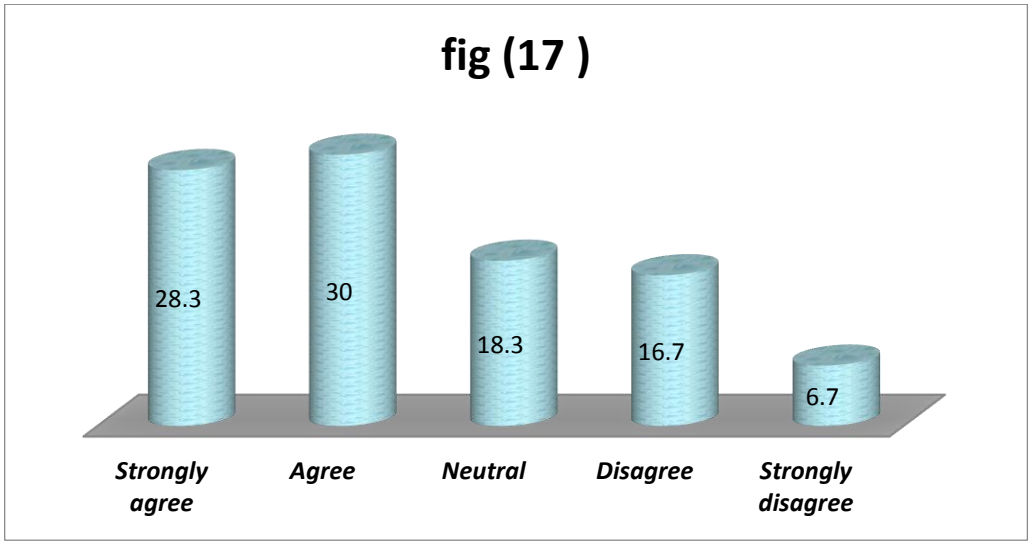
Statement No. (14): Teachers need to become familiar with ICT tools and acquire pedagogical expertise to work productively

.

Table No (27) The Frequency Distribution for the Respondent's Answers of Statement No. (14)

Valid	Frequency	Percentage%
Strongly agree	34	28.3
Agree	36	30.0
Neutral	22	18.3
Disagree	20	16.7
Strongly disagree	8	6.7
Total	**120**	**100**

It is clear from the above table No.(27) and figure No (17) that there are (47) persons in the study's sample with percentage (39.2%) strongly agreed with " Teachers need to become familiar with ICT tools and acquire pedagogical expertise to work productively.". There are (35) persons with percentage (16.7%) agreed with that, and (20) persons with percentage (8.3%) were not sure that, and (10) persons with percentage (6.7%) disagreed. and (8) persons with110.0% are strongly disagree.



Many studies about how computers are utilized in schools reveals that although there have been many successes involving effective implementation of computer technology, a more sobering reality exists. Surveys indicate that computers aren't fulfilling their potential to effect significant changes in education, are under-utilized, and are not being implemented in very effective or creative ways (Ginsberg & McCormack,

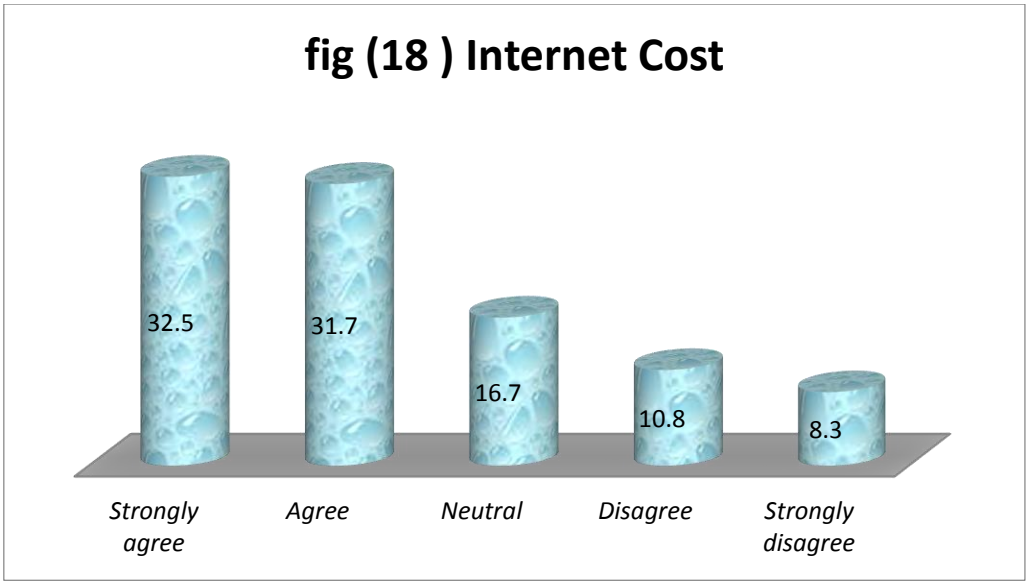
1998 ; Bennet, 1997 ; Miller & Olson, 1995). Though teachers agree on the potential that lies in computer technology to effect significant changes in education, more often than the full potential of the computer is not being exploited. The reality is that computers are most often employed to supplement traditional classroom pedagogy and have not been fully integrated into classroom learning activities (Ginsberg & McCormick, 1998). What are some of the factors that prevent teachers from implementing computers and realizing the full potential of the technology? Therefore, *teachers need to become familiar with ICT tools and acquire pedagogical expertise to work productively.*

Statement No. (15):*Internet cost hinders its use in education*.

Table No (28) The Frequency Distribution for the Respondent's Answers of Statement No. (15)

Valid	Frequency	Percentage%
Strongly agree	39	32.5
Agree	38	31.7
Neutral	20	16.7
Disagree	13	10.8
Strongly disagree	10	8.3
Total	**120**	**100**

It is clear from the above table No. (28) and figure No (18) that there are (39) persons in the study's sample with percentage (32.5%) strongly agreed with "*Internet cost hinders its use in education*. ". There are (38) persons with percentage (31.7%) agreed with that, and (20) students with percentage (16.7%) were not sure that, and (13) persons with percentage (10.8%) disagreed. and (10) persons with18.3% are strongly disagree.



Ginsberg and McCormack (1998) conducted a survey of 1163 teachers to discern what barriers teachers encounter in using computers. The responses to their survey indicated that issues surrounding computer hardware were the most serious barriers affecting implementation:

Regarding hardware, teachers in both highly and less effective schools reported "serious" to "very serious" concern with "too few computers" and "too few printers." Teachers in less effective schools also reported concerns about "computers being too limited" and they are costly beyond the schools financial capability. (p. 2). Middleton, Flores and Knaupp (1997) view the hardware factor as an accessibility barrier. They contend that computer labs are an effective strategy for reducing the student-to-computer ratio in schools. However, the competition between teachers for blocks of time in the computer lab may result in some teachers giving up on scheduling time in the computer lab and thereby ceasing to implement computers in instruction.

They also contend that the accessibility to computer hardware may also be dictated by the subject being taught. In some instances, the physical location of computers and the students needing access to them will act as a barrier to teachers implementing the technology. Thus, ***Internet cost hinders its use in education.***

4.4 Confirmation and Verfication of the Hypotheses

The three hypotheses in the present study have been fully confirmed with full illustrations from the tables and graphs. They are interspersed in the text at different locations.

4.5 Summary of the Chapter

Throughout this chapter, the researcher provided detailed description for the data. The findings from data were analyzed and the hypotheses were verified. In the next chapter the recommendations and suggestions for further study will be presented and discussed.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter provides a summary of the study, conclusions, recommendations and suggestions for further studies. The findings of the present study clearly indicate that WBL affects students' performance and greatly influences students' language development. As the researcher belongs to the area of study, so her observation should be taken in consideration.

5.1 Summary and Conclusion

This study is an attempt to explore the use of web-based information to enhance learning English in general and vocabulary in particular as reflected for the Sudanese EFL undergraduate students at the University of Sudan of Science and Technology. The aim is to find out whether the incorporation of the internet with all the new technological gadgets and devices such as hand held phones and mini computers can help improve the standards of our students at universities in learning English. To find answer to the pose question, the study surveyed the teachers' viewpoints in relation to the issue in question.

Basically, the study sets out to examine the questions:

1. To what extent do students and tutors view positively the incorporation of the internet into Sudanese classroom settings?
2. What are the expected barriers that hinder Sudanese learners from adopting the internet in their learning settings?
3. To what extent are Sudanese educational policymakers and experts convinced with the benefit of the internet as a learning tool?

To achieve the set objectives, the study adopted a mixed- methods approach: the descriptive analytical and experimental methods. This allowed the research instruments to complement each other. Hence, an experiment, questionnaires, and a diagnostic test were used to address the research questions and objectives. The (SPSS) program version 20 was used for data analysis.

150 undergraduate students participated in the study experiment, 120 tutors completed questionnaire, and 2 undergraduate classes were observed.

Statistically, the study found out that the teaching of linking devices can help undergraduate students improve their vocabulary. A substantial dose of exposure to excessive teaching using their mobile phones that were equipped with electronic dictionaries. The findings were in conformity with lots of works. Again the findings further have been in commensurate with the set questions and hypotheses.

It was found out those highly motivated students who have had an earlier experience with computers have managed successfully to maximize that learning environment, compared with their peers who were not introduced to this technology. However, all students picked up and speedily got along with learning.

Two thirds of the respondents supported the idea that an enhanced cultural background can help students perform properly in English in general and the targeted category, in particular. Web-based learningcanactually helpreduce the cultural gap through the different materials to be drawn on from across the globe.

On the other hand, teachers expressed a variety of views about the advantages and disadvantages of having web-based learning particularly

for the reality of underprivileged classrooms that is large groups. 90% believe that large groups can be very detrimental to the teaching operation itself and that some students would find it difficult to put up with such large classes. So the use of mobile phones as tools for learning can help Students to sit in small groups and share learning collaboratively.

Internet facilitates learning is one of variables and hypothesis where almost all respondents agreed positively to that fact and that it can help improve the performance of the students. Almost all the respondents agreed that *Internet cost hinders its use in education* and hence in order to enable students to use this effective tool for learning the authorities have to interfere to help students afford the cost of possessing the gadgets.

Students can have good access to communicative competence having been exposed to a substantial dose of material from the net. 85% of the respondents have been in favor of a syllabus which contains a good host of material taken from the web. They believe that articulateness of the material owes a great deal of its lucidity to properly applied in learning English, besides it is advantage in introducing students to a different world with different cultural views and insights.

Classroom interaction is an essential aspect of learning if the tutors managed to exploit the texts available on the internet or web-based texts, where they would like fairly original and thus can help improve quite particularly socio-cultural aspects for communication. Almost 80% of the respondents recognize the effect of varying classroom activities and enhancing classroom interaction in improving students' communicative competence especially in the realm of academic writing through the net. Principally, learning a foreign language means to communicate with other people to understand them, talk to them, read what they have

written and write to them (Byrne, 1991). Extending classroom interaction has proved useful particularly in setting like Sudanese universities where students cease using their English language outside the classroom.

Teaching and learning vocabulary in classroom settings drawing on authentic learning materials can be exploited to further improve students' language abilities. 86% of the respondents are in favor of teaching and learning vocabulary using Internet resources. Students can quite independently outside the classroom and can choose the subject-matter and themes that interest them. This sort of freedom has the effect of maximizing their learning quite considerably so long as it's their own choice. The use of computers can help students to do different language learning tasks and can help create interest and cooperation between peers in the classroom. Though it was proved in a number of studies across the globe that the use of the internet in classroom settings is likely to bring about positive result in learning, it is still lagging behind in our classrooms. This is attributable to the fact it is financial costly to fit the entire classroom with internet. However, there can be a lab for all the school where students can attend classes in turn.

The results of this study also revealed that tutors have positive attitudes towards the use of web-based learning in teaching and learning situations. The majority of the respondents agreed that Internet tools are important in and out classroom and it is necessary to convince teachers and policy makers of the benefits of these tools in improving EFL learners. The culture of any learning setting can not be expected to change immediately but presupposes a long process and testing different cognitive and pedagogical practices.

Although there seems some problems with using Internet tools in teaching and learning English language such as lack of technologies

knowledge and skills and the high costs of technological tools implementation, positive attitudes are promising for Sudan.

5.2 Recommendations

Based on the findings of this study, the following recommendations are suggested:

1. Tutors should seek to teach the different skills by drawing heavily on texts and materials from the web.
2. Tutors should encourage their students to browse the internet for original interesting material that suits their likes and inform them on different topics.
3. Students' motivation for learning is facilitated through using extended knowledge resources embedded in the Internet.
4. Special attention should be given to the fact that all students are actually using their devices for learning purposes.
5. Feedback should not be neglected as our students are drawing on instruments of learning which could have been equally well detrimental.

5.3 Suggestions for further studies

This study put forward the following suggestions for future researchers:

1. More evidence is required to substantiate the process teaching through drawing on the web.
2. Much research is needed with respect to the type of English language syllabuses adopted at Sudanese universities. Tutors should browse the web to substantiate their syllabuses.
3. A research is needed to explore the entire syllabuses we have and to further develop them along web-based material.

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Appendices

Appendix (A)

SUDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

GRADUATE COLLEGE

COLLEGE OF LANGUAGES

ENGLISH LANGUAGE DEPARTMENT

PRE TEST EXAM

OCTOBER 2017

STUDENT'S NAME…… STUDENT'S NO……

EXAM COMPONENTS GRADES AND TIME YOU ARE ADVISED TO SPEND ON EACH PART

SECTION	MINUTES	TOTAL POINTS	EARNED POINTS
ONE	40	15	
TWO	40	15	
THREE	40	20	
TOTAL	120	50	

SECTION	ONE	ALTERNATIVES	40 M	10 POINTS

Choose the meaning of underlined words or phrases from the given four alternatives:

1- Striding briskly down the Cobble Stone road, she caught her shoes between the bricks.

a. carelessly b. unpretentiously c. quickly d. quietly

2- The proprietor of the inn was a corpulent man.

a. guest b. cooker c. waiter d. owner

3. The splendor of the spring morning was breath taking.

a. serenity b. sight c. dismalness d. magnificence

4. A hush fell over the guests who had gathered for the wedding celebration.

a. witnessed b. gaped c. participated d. assembled

5. Walking up in that immense room made James's head swim.

a. frightening b. huge c. bleak d. colorful

6. The campus library was able to build a new wing because it had rich benefactor.

a. bank account b. patron c. campaign d. heir

7- The coveted Oscar was won by the best performing actor.

a. much desired b. rewarding c. outstanding d. highly regarded

8. It was inevitable that the smaller company should merge with the larger.

a. urgent b. unavoidable c. important d. necessary

9- The recent medical break thoroughly was the culmination of many years of experimentation.

a. result b. climax c. abyss d. cultivate

10- The old utilities were demolished and a new high risk took its place.

a. renovated b. razed c. remodeled d. reconciled

SECTION	TWO	GAB FILLING	40 M	15 POINTS

Choose the words below that best complete the sentences in the text:

Public opinion polls show that crime is…… (1) as one of the most serious problems of many societies. Yet, …… (2) studies have revealed that the …….. (3) of violent crime is …… (4). Our peculiar awareness and fear is largely brought about by the great attention it is …….. (5) in the mass media and also because of violent crime being a popular theme for television, series and films.

Among all crimes, murder makes the …….. (6) and there is little doubt that homicides still continue to be a …….. (7) question in a number of countries. The various causes of severe crime. Crime are being constantly …….. (8) and in numerable reasons for it are being pointed out. Among these are unemployment, drugs ……(9), inadequate police enforcement, ineffective courts, racial discrimination, television and the general …….. (10) in social values.

An acknowledged fact is that it is mainly poverty that …… (11) crime. Individuals incapable of …….. (12) for themselves and their families the

rudimentary means of living unavoidably take……. (13) stealing, burgling or …….. (14) other offences. We may try to explain crime on different …….. (15)-cultural, economic, psychological or political but criminologists are still far from detecting the exact source of violent offences as the direct link between these particular factors isn't possible to specify.

1- a) viewed b) believed c) alleged d) thought

2- a) pervading b) infiltrating c) examining d) penetrating

3- a) quantity b) deal c) amount d)figure

4- a) outspoken b) overestimated c) presupposed d) upgraded

5- a) granted b) awarded c) devoted d) entrusted

6- a) headlines b) titles c) caption d) broadcast

7- a) burdening b) obstructing c) nagging d) contending

8- a) debated b) conversed c) uttered d) articulated

9- a) escalation b) abuse c) maltreatment d) disuse

10- a) flop b) impediment c) shortfall d) decline

11- a) rears b) nurtures c) breeds d)urges

12- a) insuring b) affording c) securing d) accommodating

13- a) on b) to c) for d) with

14- a) committing b) performing c) fulfilling d) conducting

15- a) movies b) arguments c) reasons d) grounds

SECTION	THREE	WORDS FORMATION	40 M	15 POINTS

Put the words between brackets in the correct form:

1- Nobody has applied for the mission knowing how---------- (hazard) it may be.

2- Another attempt to establish a ---------- (last) peace has failed after one of the negotiators refused to assign the treaty.

3- It's Frank's ---------- (obstinate) that drives his parents crazy. They can't even persuade him to brush his teeth in the morning.

4- The establishment broke up after it had been discovered that several officials were involved in---------- (bribe) and corruption.

5- The fireworks show was most---------- (spectacle). No wonder it attracted such big crowds of people.

6- We place a full---------- (rely) on George whenever assistance is needed.

7- Dany is just an---------- (acquaint) of my father. We don't know him very well.

8- I think her---------- (apt) for foreseeing the future has been ignored for too long. Think about the misfortunes that could have been averted if someone had taken notice of her predictions.

9- The route we had chosen couldn't have been more---------- (peril). There were tropical forests and rivers with alligators all around us.

10- It's clear now that Robin is simply---------- (envy) of all his brothers' privileges.

11- Never before have I seen more---------- (picture) land escapes than here in the mountainous region of the Alps.

12- If only we hadn't forgotten to take mosquito---------- (repel), we wouldn't have suffered from so severe bites.

13- This new situation is more than---------- (advantage) to all the investors. Definitely, it’s a chance not to miss.

14- The customs officer insisted on examining the---------- (contain) of our suitcases.

15- The bad boy ought to be punished for his wrong doing as there was no---------- (just) for acting the way he did.

END OF THE EXAM

Appendix (B)

Sudan University of Science and Technology

College of Graduate Studies and Scientific Research

Questionnaire on Web-based Leaning to Enhance English Language Vocabulary

Dear Teachers,

The questionnaire on your hand is related to the above study and what you would mention of information and knowledge is confidential and can never be used to more than the purpose of the study. We would like to ask you to help us by answering the following questions concerning the study. This survey is conducted to university teachers to know their opinion about using Web-Based Learning (WBL) in Sudanese universities to enhance English language in general and vocabulary in particular. Please give your answers sincerely as only this will guarantee the success of the investigation.

The researcher

Section One:

In this section we would like you to answer some questions concerning general background information.

1. Name…….(optional) ☐ Male ☐ Female

2. Qualification's Degree:

a. Bachelor b. Master c. PhD d. Professor

3. Level of Students' taught

a. Junior b. Senior c. All

Section Two:

In this section we would like you to answer some questions concerning some facts.

1. I Communicate via Internet

a. everyday b. two days a week c. three days a week d. never communicate

2. I Communicate via short messages (no need for quick response)

a. participating in discussion forums b. keeping blogs c. participating in public/private chat d. other

3. Online communication you take part in is mostly related to (you can choose several options)

a. work b. academic issues c. leisure topics d. others

4. What kind of English do you usually use while communicating online?

a. formal b. informal c. both

5. Do you use ICT tools in your teaching?

a. always b. sometimes c. rarely d. never

Section Three:

In this section we would like you to answer this questions according to your opinion in each point.

No	Statement	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1.	Computer knowledge is important to an English teachers.					
2.	ICT tools enhance English language teaching and learning in an EFL classroom.					
3.	Students will learn more when information is adopted by a variety of learning channels than when only a single channel of learning is used.					
4.	I like to see Internet incorporating into Sudanese classroom.					

5.	I can use internet in my classroom if it is available and if I am well trained to use it.					
6.	Internet promote students' motivation for learning.					
7.	Using web-based learning in teaching cancel English teacher's role.					
8.	Using Internet outside the classroom gives students more autonomous in language learning.					
9.	Web-based Learning is an efficient approach to enhance and extend students' vocabulary.					
10.	Internet facilitate meaningful interaction between students-teacher and students-students.					
11.	Watching video programs or movies in English is the most common self initiated contextualized vocabulary learning activity.					
12.	It is necessary for teachers to encourage students to develop their own vocabulary strategies.					
13.	I think lack of computer training and digital skills hinder English language					

	teachers from using them in teaching.					
14.	Teachers need to become familiar with ICT tools and acquire pedagogical expertise to work productively.					
15.	Internet costs hinder its using in education.					
16.	Policy makers and expertise may not convince with the benefits of the Internet as a learning tool.					

Thank you for your time