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INVESTIGATE THE EFFECT OF USING TECHNOLOGY IN LEARNING ENGLISH
LANGUAGE AS A SECOND LANGUAGE

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ABSTRACT

This study attempted to identify the extent to which the use of technology can facilitate and support learning of English language. The study adopted the one-group experimental design. The sample of the study consisted of 40 pupils of two classes; 20 pupils Grade Four and 20 pupils Grade Seven of Basic level. The study continued over 2 months. Pre- and post-tests were administered in order to collect data. The means were compared by using the SPSS programme. The findings showed a considerable increase in students' achieving in terms of improvement in their language skills and their hand writing. The study offered some recommendation and suggestions for further research concerning the use of technology in the earlier years of learning the foreign language.

1.1 Introduction

New technology has become an important aspect of today's life. When it comes to education in general, the technology becomes even more important. This importance is especially felt in teaching and learning of foreign languages. It makes a big different in the teaching and learning of English as a second or foreign language. Technology a tool that can change the nature of learning. "We need technology in every classroom and in every student and teacher's hand, because it is the pen and paper of our time and it is the lens through which we experience much of our world ". Dwarlick. Technology is very much part of language learning throughout the world at all different levels. Technology is everywhere, tangled in almost every part of our lives. It affects how we shop in virtual shop and buy and sell things by using technology. e.g. mazon.com, socialize by social media Facebook, Instagram, WhatsApp, Snap chat.... etc. , connect, play online and offline games, and most importantly learn. With their great and increasing presence in our lives it only makes sense to have technology in the classroom 21st century classroom. Yet there are some schools that are delaying this coming up future of using new technologies in the classroom as the valuable learning tools.

Problem Statement of Study

The purpose of this paper is the researchers observed that the standards of learners in the age of primary schools are low standard, and they have bad handwriting. This is indicated in terms of:

- 1) Writing skills (basic writing skills, handwriting and spelling).

- 2) Speaking skills (basic speaking skills, pronunciation, classroom interactivity, introduce their selves).
- 3) Reading skills (basic reading skills, reading comprehension)
- 4) Listening skills (listening comprehension to interact with their teacher).

In addition they do not pay attention during the lesson and feel. Bored. They want to play and chat all the time during school time. And when they back home, they want to watch T.V, games on computers or on their cell phones and listen to music.

This paper will investigate the effects of using technology in learning English language as a second languages.

1.2 Objectives of the study

- 1) To evaluate that using technology can facilitate and support learning process.
- 2) To emphasize that, technology makes a big difference in learning, teaching and education.
- 3) To prove that the use of technology in learning motivates students and teachers.

1.3 Questions of the study

1. To what extent can technology develops and effects in learning the four skills of English language?
2. In what ways do students benefit from technology?
3. What are the suitable materials of technology that can be used in learning?

1.4 Hypotheses of the study

- 1) Using technology can develop the four English language skills.
- 2) Student who use technology in learning can benefit from it.
- 3) There are many types of suitable materials and programs that can be used in learning English language.

1.5 Methodology of the study

This study is experimental in nature. It uses the one-group experimental design. Two classes will be involved; Grade Four and Grade Seven. There will be two tests; a pre-test and a post test The two grades will be taught their textbooks but by using technology. The textbooks are (SPINE 1) for Grade Four and (SPINE2) for Grade Seven. This will take two months of instruction through PowerPoint, videos, stories and songs. Then the results of the two tests will be analyzed and compared by SPSS program.

1.6 Limitation of the study

This study will be limited to the learners of Grade Four and Grade Seven in Ahfad University for Women– Primary School. It will be restricted to the four skills and their standards and their handwriting. The experiments will use the PowerPoint programme.

1.7 Significance of the study

This study will be of value for the teachers in adopting technology as a method of learning and it focus on the attention of police makers and educators on the possibilities of technology in enhance the outcomes of learning English language. It draws the attention of schools principles and classrooms' teachers to explore the abilities of new generation in dealing with modern technologies.

Theoretical Framework and Literature review

2.1 The Role Technology in Learning English Language

Technology can be used as an effective tool to learn English language as a second language, many of researches show how technology can help English language learners to develop their four English language skills. Teaching learners to be good in their English language that means to be good in all English language skills such as: reading, writing, listening and speaking. This is the major and the greatest challenges. Now a days the

old methods of teaching English language became effective less with the digital generation in many classrooms, and many learners feel English language is difficult and sometimes is boring subject, because their environment has changed from many years ago. Qualified teachers face challenges of their learners who do not speak English language as they learn them, because the learner do not practice English language after their class and as they second language learners their cultures do not speak English as first language. Learners who learn a new language as a second language need as much language support and motivation as possible. Teacher who have taught learners learning English as a second language know that any language support and motivated is helpful for their language acquisition easily. English second language learner (ESL) needs many of language experiences, they need to hear language from natives, write, speak and read language correctly. Technology can play an integral part in providing ESL with helpful language experiences as first speakers. This paper focuses on how technology can be a supplemental teaching tool for teaching English language learners. In addition, the benefits that have been found in using technology with ESL are also provided. This research wants and hope, learning English language became better especially in basic schools because they need to learn English correctly especially in pronounce words and acquire grammar and vocabulary from the beginning, that can achieved by using technology.

2.2 Using Technology in English Language Skills

Learning English language means to be able to; read, write, speak and listen English language .Using technology in learning English language can improve and increase the ability of learning, and improve the four English Language Skills. We mean by English language skills, the development of the main parts or elements of the language which are speaking, listening, reading, and writing skills. Each language subject or area has different educational tools that are likely suited with it. "The use of several technical tools has a significant effect on the learning process of each area of the language" (Sharma, 2009). English language skills are classified as input skills and output skills as shown in Figure 1.

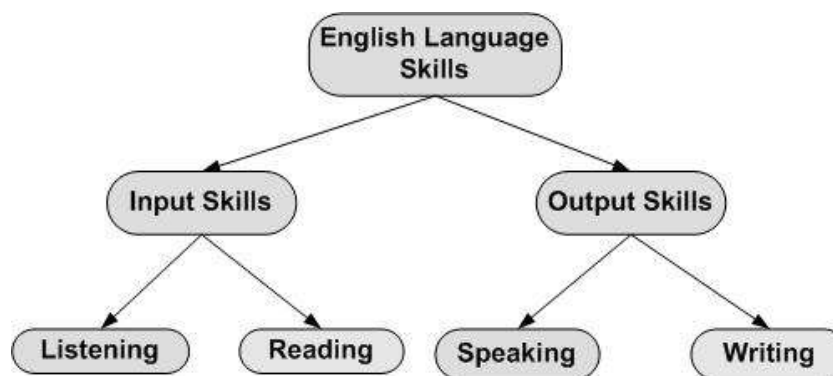


Figure 1. Classification of English language skills

These skills need several techniques, methods and materials to develop, and we can develop them when we use technology in learning English language .We can use technology in skills as such:

2.2.1 Speaking skills (Verbal Interaction)

Communication is important it means exchange information between a speaker and a listener when they understand each other. In ESL Both speaker and listener have a role to achieve in simple expressions. The speaker has to adapt his message into spoken language, while the listener has to receive and understand the language of the speaker. Speaking is more important skill that gives an evidence of student's ability of learning English well. Most teachers are ignore speaking listening and skills, and many curriculums had not given attention of speaking skills, so using technology can create and offer an opportunity to develop speaking skills and verbal interaction inside a classroom by giving them videos or songs with lyrics that can encourage them to practice and memories English inside and outside the classroom, even if their syllabus does not contend this skill. There are many activities in many webs, programs and applications with color, music, and beautiful videos and pictures (online –offline), that can help and increase their interesting to learn how to speak at any

time, that means they find their mood to learn. Liaw(1997).{*Teachers should offer English language learners a language-rich environment in which students are constantly engaged in language activities. Children need to be able to interact with each other so that learning through communication can occur. Technology can facilitate this type of environment. The computer can act as a tool to increase verbal exchange*}.

Technology has large amount of programs that give the learner to repeat what they heard in correct stress, pronunciation from natives and give them an opportunity to check their answers if it true or false, or as a game in their homes or as a homework in class time Liaw (1997), (*Technology books were used to investigate whether computers increase verbal interaction between students. These computer books are interactive stories that appear on the computer screen as an actual book with text and illustrations. There are also a variety of interactive choices students can use to read the story, including: real voices that read aloud, music, and sound effects. The story is also highlighted so readers can follow along with the text*). (Even though the children had limited English language proficiency, they engaged in various modes of language functions to accomplish their reading of the computer books, they made many commands to each other. They also shared opinions and made suggestions. They tended to ask a lot of questions of their partners and were given responses) Liaw(1997). Thomas Edison once said, "Books will soon be obsolete in the public schools, our school system will be completely changed inside of ten years." wonderfully enough, however, one of U.S most important inventors was established reasonably wrong. The American education system has an amazing struggle to advance and the classroom experience has changed very little.

2.2.2 Writing Skills

Writing is the process of using symbols (letters of the alphabet, punctuation, and spaces), Writing skills is output skill it depends on learner's knowledge of vocabulary, accurate spelling, and correct use of punctuation and grammar, they are the keys of good writer .The writing process can be very difficult for learners of English language as a second language they must do tasks like generating ideas, organization, and perfect use of grammar and vocabulary. The way for improving writing skills for the English language learner to be good writer and demonstrated is technology, it encourages learners to improve their grammar, vocabulary, punctuations, capitalization and spelling. By provide them web programs, lessons designed by power point, games...etc that encourages greater collaboration among learners and support, develop and help English language learners to increase their motivation and their knowledge. (*Technology can help ELL students develop their writing skills*), Lewis (1997). Writing composition for beginning learners should be a guided activity 'students do not become disturbed. Writing paragraphs in a language that is still somewhat unfamiliar to students can be difficult. Using technology, however, can make composition and paragraph or writing as general much more enjoyable. Using technology in other hand can also help students to converse their thoughts more clearly.

2.2.3 Reading skills

Reading is the process of understanding (comprehending) a written text by the learner. It is an important input skill which depends on the vocabulary and background knowledge of the learner about English language. (Constantinescu, 2007).said: "*During the reading process, the English language learner can improve his vocabulary and terms, acquire new information and ideas, and enhance his real-world knowledge*". Several methods have done to improve the reading ability of the learner through the use of technology. There are many ways in which technology can be used to improve reading ability. Most simple reading texts are also very primary in content. Older children may consider themselves too old to be reading such primary content books. Even young learners need to learn in indirect way, it seems to them like watching cartoon movie. However, technology, can increase the motivations and the interest level for older and young learners while keeping the text simply and easy to read. Another benefit of using technology for reading instruction is that some technologic activates offers immediate feedback on performance at any time and everywhere. They also can provide added more activates according to their needs, and practice it again when they need more practice. "*Students have been able to improve their sight word vocabulary, fluency, and comprehension. Computer*

based reading instruction also allows for increased interaction with texts, attention to individual needs, and increased independence through an ability to read texts they would not otherwise be able to read" (Case & Truscott, 1999). In other hand, "Using technology in learning English language can also improve parents participation in their children's learning while improving the parents' literacy as well, beside their children's learning English language that can make educational environment inside their homes". Landerholm, Karr, and Munshi (2000). They created a three year program in Chicago with four specific goals to help parents: become involved in the school community and become comfortable on campus, enjoy reading and writing alone and with their children, understand science and computer technology, and improve their own literacy. This project was as much for the parents as for the child. The computers were the drawing factor for the parents to become involved in the program, though they were not used initially. The program began by using other forms of technology such as photographs. Photos were taken at field trips and special activities. Parents and children then created a type of memory book using the photos and written text about the pictures. This eventually evolved into scanning the photos and typing the text onto the pages. In the Landerholm, Karr, and Mushi(2000) project, students also created book reports with their parents on the computer. Current software allows for much creativity, such as including sounds, video, clip art and photos into the text of the report. Doing the book reports encouraged the children to read more and more books. One child in the program read nearly 300 books in one year (Landerholm, et al. 2000).

2.2.4 Listening skills:

Listening is defined as the process of identifying and understanding the speech of the speakers. It involves understanding the speaker's accent or pronunciation, speaker's grammar and vocabulary, prediction and comprehension of meaning. "The listener should be capable of doing these four things at the same time" (Saricoban, 1999). Therefore, listening is very important in the process of second language learners they can acquire weak forms simply from natives. Listening is considered as a principal language skill. Through listening people can acquire a large section of their education, their information, their ideas, and their understanding of the world. "As an input skill, listening plays a vital role in student's language development" (Saricoban, 1999). There are several technical techniques for improving the listening capability of the English Second Learners (ESL). Technology is the best useful for listening ability and teach listening skills because each type of technology provides great opportunities for learners to get their scope of listening ability. It allows for more attention on specific aspects, such as critical, cross-cultural, contextual dimensions, interactional of listening, to be developed and improve. Technology also makes learning process of listening more motivated and interesting.

2.2.5 Vocabulary Development

To acquire and learn new words that is known as vocabulary development. One way to use technology for English Language Learning is to learn and develop vocabulary in context that means by using picture, videos..etc. "Any attempt to treat vocabulary learning as learning of isolated facts certainly will not promote real vocabulary knowledge". (Kang and Dennis (1995). Learners need to learn vocabulary in context and with visual clues to help them understand and acquire vocabulary easily. Technology can provide this rich vocabulary in contextual environment. The technology also allows students to become active learners. Because every learner has own learning styles and learning strategies, which learners can learn throw them. Another modern way for improving the vocabulary of the learner focuses on the use of electronic dictionaries designed specifically for English language learners." (Constantinescu, 2007).

2.3 Technology Integration in learning:

Technology integration as "edutopia"(February.2016) means seamless integration is when learners are not only using technology daily, but have access to a variety of tools that match task at hand and provide them the opportunity to build a deeper understanding of content. In addition it depends on the kinds of technology available, how much access one has technology, and who is using technology. For example, in a classroom with only interactive whiteboard and one computer, learning is likely to remain teacher- centric, and integration will

revolve around teacher's needs not necessarily students' needs. In other words "Technology integration" is the use of technological resources and tools, for instance, interactive whiteboards computers, , and mobile devices hand held like lab tops, smart phones, I pads, tablets, digital cameras. Or social media like : Facebook, twitter, instagrm, skipe, whatsapp, and network, software applications, the internet...etc in daily classroom practice, management and environment of a school. Successful of integration is achieved when the use of technology is: Routine and transparent, Accessible and readily available for the task at hand, supporting the curricular targets and helping the learners effectively to reach their targets."Effective integration of technology is achieved when learners are able to select technology tools to help them obtain information in a timely manner analyze and synthesize the information, and present it professionally. The technology should become an integral part of how the classroom functions as accessible as all other classroom tools." "edutopia"(February.2016)

2.4 21st Centenary Skills

"The Glossary of Education Reform (GER), 2015" defined 21st century skills as a board set of knowledge, skills, work habit, and character trains that believed by educators, school reformers, college professors, employers, and others to be critically important to success in today's world, particularly in collegiate programs and contemporary careers and workplaces. Generally speaking, 21st century skills can be applied in all academic subject areas, and in all educational, career, and civic settings throughout a student's life. "Thoughtful learning k-12" defined 21st century skills as a set of abilities that students need to develop in order to succeed in the information age. The partnership for 21st century skills lists three types such as: Learning Skills (critical thinking, creative thinking, collaborating, and communicating skills), Literacy Skills (information literacy, media literacy and technology literacy) and Life Skills (flexibility, initiative, social skills, productivity and leadership). All of these skills can be archived simply and effectively by using technology that means using technology in all life is effective.

3.1 Study Procedure

This study is experimental in nature. It attempts to investigate the effect of using technology in learning English language as a second language quality wise and quantity wise. The study tries to highlight on the different aspects of the problem and explain the phenomena as it in reality. The geographical limitation of the study will be in Sudan, Khartoum state, Omdurman, Ahfad University for women –primary school, which includes seventh and fourth grades. The researchers started collecting data from last September 2017, until mid of February 2018. The population of this research consists of respondents learners who study English language as a second language and as subject. And their standard in English language skills is very low, and their hand writing is very bad too, that conduct in overall the result. The sample consist 40 pupils from two classes, (20) pupils in fourth grade and (20) pupils in seventh grade. They are from Ahfad University for Women –primary school. The age of fourth grade is between (9-10) years old, and the age of seventh grade is between (11-12) years old.

3.2 Instrumentation

This study took about 5 months. The instrumentation which was used as data collection consulted secondary data which has been achieved from articles, books, researches, and websites. The primary data have been obtained through two tests, pre-test and posttest. After pre-test the researchers used projector and loud speakers to display lessons had prepared by power point, to display songs, videos and activates in English language related to the lessons and gave them assignment for some information to look it up in Google and send it in the researcher e-mail that to be familiar of using technology for academic purpose. The collected through instrument were analyzed statistically using SPSS program (paired sample test) to compare the result of two test (pre-test and posttest). Then the analyze data were discussed and used to answer the research questions and to check the hypotheses. The data will be collected from the sample of the learners and analyzed quantitatively in order to provide answers for the research questions

4.1 Analysis of the data collected by pre-test and post-test for Grade Seven:

1. Assumptions

The three basic assumptions for the paired sample t-test are met.

- a. The observations are independent of each other:

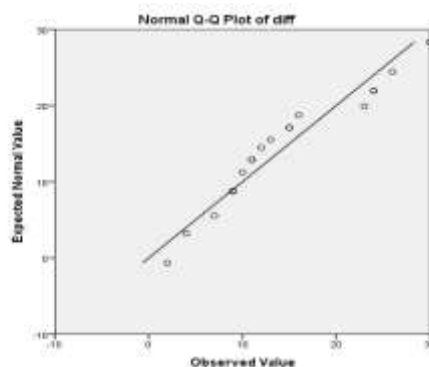
The same group is tested twice; before using the 'activation of schema' approach (pre-test) and after using it (post-test).

- b. The dependent variable is measured on an interval scale:

The dependent variables are the scores obtained by the students.

- c. The differences are normally distributed in the population:

The graph below shows that.



Almost all of the values are on or close to the diagonal line.

This means that the differences are normally distributed.

1. Hypotheses

H₀: There is no difference between the scores of the students before using the PowerPoint programme and after using it.

H₁: There is a difference between the means of the scores of the students before using the PowerPoint programme and after using it.

Results of the Paired Sample t-test

The tables below show the results of the paired t-test for Grade Seven.

Table (1): Grade Seven Test: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	post	37.8000	20	3.33404	.74551
	Pre	22.8000	20	9.67144	2.16260

This table shows that the post-test mean is higher than the pre-test mean: 37.8000 vs 22.8000.

Table (2): Grade Seven Test: Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	post & pre	20	.814	.000

This table shows the correlation between the two variables. The Sig. is less than 0.05. This means that there is a strong positive correlation. The students who did well on the pre-test also did well on the post-test.

Table (3): Grade Seven Test: Paired Samples Correlations

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	post - pre	15.00000	8.36660	1.87083	11.08431	18.91569	8.018	19	.000

According to this table, $t(19) = 8.018$, $P = 0.000$. The level of Sig. is 0.000 which is less than 0.05. This indicates that there is strong evidence that using the PowerPoint programme has considerably enhanced the learning outcome of the students.

Therefore, the null hypothesis is rejected in favour of the alternative hypothesis. There is a difference between the mean of the scores in the two variables.

4.2 Analysis of the data collected by pre-test and post -test for Grade Four

4.2.1. Assumptions

The three basic assumptions for the paired sample t-test are met.

- d. The observations are independent of each other:

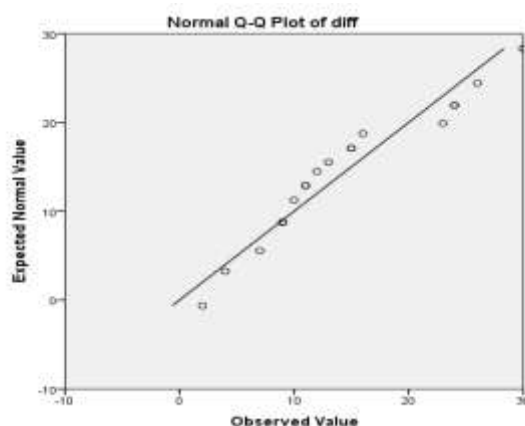
The same group is tested twice; before using the 'activation of schema' approach (pre-test) and after using it (post-test).

- e. The dependent variable is measured on an interval scale:

The dependent variables are the scores obtained by the students.

- f. The differences are normally distributed in the population:

The graph below shows that.



Almost all of the values are on or close to the diagonal line.

This means that the differences are normally distributed.

4.2.2. Hypotheses

H₀: There is no difference between the scores of the students before using the PowerPoint programme and after using it.

H1: There is a difference between the means of the scores of the students before using the PowerPoint programme and after using it.

4.3 Results of the Paired Sample t-test

The tables below show the results of the paired t-test for Grade Four.

Table (4): Grade Four Test: Paired Samples Statistics

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Post test	30.7000	20	8.41740	1.88219
	Pre tests	21.1500	20	8.97526	2.00693

This table shows that the post-test mean is higher than the pre-test mean: 30.7000 vs 21.15000.

Table (5): Test1: Paired Samples Correlations

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	post & pre tests	20	.537	.015

This table shows the correlation between the two variables.

The Sig. is less than 0.05. This means that there is a strong positive correlation. The students who did well on the pre-test also did well on the post-test.

Table (6): Grade Four Test: Paired Samples Correlations

Paired Samples Test

	Paired Differences					t	df	Sig.(2-tailed(
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair post - pre	9.55000	5.32595	1.19092	7.05738	12.04262	8.019	19	.000

According to this table, $t(19) = 8.019$, $P = 0.000$. The level of Sig. is 0.000 which is less than 0.05. This indicates that there is strong evidence that using the PowerPoint programme has considerably enhanced the learning outcome of the students. Therefore, the null hypothesis is rejected in favour of the alternative hypothesis. There is a difference between the mean of the scores in the two variables.

4.4. Conclusion

The statistical analysis evidenced that using technology in learning English language as a second language enhanced, supported and facilitated the learning of English language in all levels and all ages. However, but, in

paired differences, of the two test pre and post tests in Grade Seven is less than in Grade Four which indicates that using technology in early age is better and achieved more satisfying results.

5.0 Results and Recommendations

5.1 Results

5.1.1 Question one and Hypothesis one

Q.1 To what extent can technology develops and effects in learning the four skills of English language?

H.1 Using technology can develop the four English language skills.

From the statistical analysis in Chapter Four, it is clear that there were statistically significant differences between the means of the pre-tests and the post tests. In both cases, the level of significance is less than 0.05. This indicates that using technology has had a positive effect on the language skills.

5.1.2 Question two and Hypothesis two

Q.2 In what ways do students benefit from technology?

H.2 Student who use technology in learning can benefit from it.

The statistical analysis in Chapter Four shows that there is advancement in the academic performance of the learners as the means of the post tests are higher than those of the pre-tests. In Grade Seven, the means were 37.8 vs 22.8; and for Grade Four they were 30.8 vs. 21.15. It has also been observed that the technology has a great role in improving and developing English language skills and their hand writing when they watch videos of hand writing and practice writing.

5.1.3 Question three and Hypothesis three

Q.3 What are the suitable materials of technology that can be used in learning.

H.3 There are many types of suitable materials and programs that can be used in learning English language as a second language

The results of the two questions and two hypotheses above show that the technology has a positive effect on the achievement of the learners. The technologies which were applied in the experiment included laptops, computers, and hand held devices. Also, the programmers included online activates that have immediately feedback, mp3 and mp4 for videos and songs.

In conclusion, it can be said that,

- There is positive relationship between using technology and learning English language as a second language.
- Using technology in learning English language as a second language interacts, motivates and pursues attentions of learners.
- Learners who use technology to learn English language as a second language they develop learn correct English language skills especially in listening and speaking skills (pronunciation, stress, and weak form) because they learn it from natives directly.
- Learners gain and develop other knowledge beside achieve their education goals, for example they learn how to type in the keyboard and use email address to send assignments throw it.
- Technology provides the learners with information on different modes, at any time and everywhere.
- Using technology facilitates and supports learning process.
- Technology makes teachers creative they can add information to lesson improves designing lessons plans and facilitate and increase the achievement of lesson objectives.

- Using technology in learning English language instills love of English language and they feel to learn more and more.

5.2 Recommendation:

The researchers recommend that:

- Schools should consider use of technology as main method of teaching English language as a second language.
- The syllabus should contain CDs of listening and speaking skill to provide the learners opportunity to speak at least to express their feelings and introduce themselves.
- Ministry of education should undertake courses for teachers to know how to use technology in education and use it as method of teaching English language as a second language.
- Teachers should develop themselves to be up to date by using technology in their lessons even the lessons are not English language to achieve their objectives.

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