Investigating the Role of Information and Communication Technologies in Teaching Reading Comprehension in EFL Classes:


Eiman Ahmed Yousfi Mohammed

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DEDICATION

To my Husband, family and colleagues.
ACKNOWLEDGEMENTS

First, praise be to Allah, the Almighty, for enabling me to accomplish this work. Then, my thanks are extended particularly to my supervisor Dr AdulGadir Mohammed Ali, University of Gezira whose support has been very vital for me. Moreover, I would like to express my gratitude to the co-supervisor of this study Dr Ahmed Gasm Alseed, whose also has helped me. Furthermore, many thanks are extended to my colleague at Jazan University. I am also indebted to my small family, my brothers and sisters. They have been a constant source of inspiration for me. Finally, I owe more thanks to the administrators, teachers and students in Al Hasahisa secondary schools.
Eiman Ahmed Yousfi Mohammed

Abstract

Teaching reading comprehension is very essential to develop a foreign language. Using information and communication technologies such as computers and internet to teach reading comprehension in EFL classes in secondary schools nowadays represents a sign of progress in education. This study is concerned with investigating the role of information and communication technologies in teaching reading comprehension in EFL classes. This study was conducted in the secondary schools. It aims at showing the importance of ICT devices in teaching reading comprehension in EFL classes. It also aims at increasing EFL students' motivation by using ICT devices in teaching reading comprehension in EFL classes. Moreover, it aims at investigating the difficulties encountered by EFL learners in teaching reading comprehension in EFL classes. Furthermore, it aims at identifying suitable ICT devices that EFL students prefer to use in reading comprehension classes. The study adopted the descriptive analytic method. The data of the study were collected by means of a questionnaire of (37) items which were distributed to 100 participants: administrators, teachers and students, in the academic year 2015. The data were analyzed by SPSS program. The result of the analysis showed that ICT devices are not available in the secondary schools. It also was found that irregularity of electricity current impedes the use of ICT devices in secondary schools. Finally, it was found that the none availability of specialized technician causes problems in implementing ICT devices in the secondary schools. In the tight of these findings the study recommended solving these problems and facilitating the implementation of ICT devices in secondary schools.
مراعاة دور تكنولوجيا الاتصالات والمعلومات في تدريس القراءة الصامتة في فصول اللغة الإنجليزية: دراسة حالة في المدارس الثانوية بمحلية الحصاحيصا، ولاية الجزيرة، السودان (2015)
ابن احمد يوسف محمد

من خلا دراسة

يعتبر تدريس القراءة الصامتة مهم وذلك لتطوير اللغة الإنجليزية. استخدام وسائل تكنولوجيا الاتصالات والمعلومات مثل الكمبيوتر والإنترنت في تدريس القراءة الصامتة في فصول اللغة الإنجليزية في المدارس الثانوية في هذه الأيام يمثل علامة من علامات التطور في التعليم. تختص الدراسة بدراسة دور تكنولوجيا الاتصالات والمعلومات في تدريس القراءة الصامتة في فصول اللغة الإنجليزية. تم إجراء هذه الدراسة في المدارس الثانوية بمحلية الحصاحيصا. هدفت الدراسة لتوضيح أهمية تكنولوجيا الاتصالات والمعلومات في تدريس القراءة الصامتة في فصول اللغة الإنجليزية.

واضعا هدفت لزيادة تحفيز الطلاب باستعمال وسائل تكنولوجيا الاتصالات والمعلومات لمعرفة القراءة الصامتة داخل فصول اللغة الإنجليزية. بالإضافة الى ذلك، احتل الدراسة معرفة الصعوبات التي تواجه القراءة الصامتة لدارسي اللغة الإنجليزية. علاوة على ذلك، هدفت الى معرفة أكثر اجهزة تكنولوجيا الاتصالات والمعلومات المناسبة التي يفضلها الطلاب في تعلم القراءة الصامتة داخل فصول اللغة الإنجليزية. وابعت الدراسة طريق التحليل الوصفي لتنفيذ هذه الدراسة من خلال اداة الاستبانة وجمع المعلومات عن طريق توزيع استبيان يحتوي على (37) سؤالا تم توزيعه على مئات المشاركين من الإداريين، الأساتذة والطلاب وذلك في الفصل الأول من العام الأكاديمي 2015.

النتائج التي توصل إليها الباحث هي أن وسائل تكنولوجيا الاتصالات والمعلومات غير موجودة بالمدرس الثانوية. وبالإضافة إلى ذلك، قطع الكهرباء وعدم توافد تقنيين مختصين يسبب مشاكل تمنع من تطبيق تكنولوجيا الاتصالات والمعلومات في المدرس الثانوية. على ضوء تلك النتائج، اوصت الدراسة بإيجاد حلول لكل المشاكل التي تواجه تطبيق تكنولوجيا الاتصالات والمعلومات في المدارس الثانوية بizational الحصاحيصا.
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CHAPTER ONE
INTRODUCTION

1.0 Background

Information and communication technologies (ICTs) are tools and resources that are used in communicating, creating, disseminating, storing, and managing information. They should be considered as a tool which assist and support the delivery of the curriculum. In the last two decades, information and communication technology (ICT) has undergone considerable development and consequently has greatly improved. ICTs cover a wide range of technologies. ICTs include radio, television, telephone (mobile) computers, internet, social networks, and digital cameras can also act as a fantastic tool in capturing the work of students. In the last decade, there has been a growing interest in using internet and computers to improve the effectiveness of teaching in secondary levels. The 1990s was the decade of computers, communications, and information access, particularly with popularity and accessibility of internet-based services such as electronic mail and the World Wide Web. At the same time, the CD-ROM became the standard for distributing packaged software (replacing the floppy disk). This allowed large information-based software packages such as encyclopaedias to be cheaply and easily distributed. As a result, educators became more focused on the use of the technology to improve student learning as a rationale for investment. Today computers in schools are both a focus of study in themselves (technology education) and a support for learning and teaching (educational technology). Although nowadays the older technologies such as radio, television, and telephone are given less attention, they have a longer and richer background as educational tools. Therefore, the integration of new ICT tools such as laptop, interactive whiteboard, LCD projector, internet, and social networks in education is still infancy in comparison with the use of older technologies such as radio and television. This is due to the limited infrastructure of ICT in and the high cost of access to internet in developing countries. ICTs contribute to education expanding access promoting efficiency, improving the quality of teaching and improving management systems. Multimedia is beneficial in both the home and classroom. Multimedia resources allowing teachers the opportunity to facilitate learning when working one to one with students or small groups. Efforts were made to find out the factors that play a major role in teaching reading comprehension in EFL classes. ICTs have a significant
impact on areas of human activity. In many countries, (ICTs) are becoming more and more important in education.

1.1 Statement of the Problem

Information and communication technology ICT is electronic technology used for storing and retrievaling of information. Teachers are not aware to the role of ICT application in teaching which improve the motivation of foreign language learners. Also students are not motivated to use ICT. The study is planned to investigate the role of ICT in teaching reading comprehension in EFL classes. Many problems face teachers and students such as, classrooms are not equipped with ICT devices, the number of computer labs are not enough, the none availability of specialized technician, the time allocated to teach reading comprehension also is not enough. Moreover, school budget and irregularity of electricity current

1.2 Objectives of the Study

This study is planned to achieve the following objectives:

a. Showing the importance of ICT devices in teaching reading comprehension in EFL classes.

b. Increasing EFL students' motivation by using ICT devices in teaching reading comprehension in EFL classes.

c. Identifying suitable ICT devices that EFL students prefer in learning reading comprehension.

d. Clarifying to what extent teachers use ICT devices in teaching reading comprehension in EFL classes.

1.3 Questions of the Study

This study wants to find answers to the following questions:

a. What are the attitudes of teachers and students towards using ICT in language teaching and learning?

b. Why is it important for teachers and students to use ICT devices?

c. What ICT devices is available in secondary schools?

d. To what extent are teachers of English qualified and ready to implement ICT in the process of their teaching?

e. What suitable kinds of ICT devices do teachers and students own and prefer to use?

f. What is the impact of the use of ICT in EFL classes?
g. Why does not ministry of education connect secondary schools classes on line?

1.4 Hypotheses of the Study

This study attempts to prove the following hypotheses:

Using technology has become more accessible, and more widely used in educational settings.

a. Teachers should know what kinds of ICT devices students prefer to use in teaching reading comprehension in EFL classes.

b. The problems of large number of students.

c. Computers and internet are available ICT devices in Sudan.

b. The problems of large number of students.

d. Technical staff and ICT devices are not available in secondary schools.

e. The use of ICT devices makes teaching reading comprehension more interesting than other skills.

f. Ministry of education should help teachers and students by increasing number of ICT devices in secondary schools.

g. Lack of school budget is a big problem.

h. Slides, over head projector, CD-Room and using flashcard are not used in EFL classes.

i. Electricity abrupt impedes teaching reading comprehension in EFL classes.

j. The time allocated to teach reading comprehension in EFL classes is not enough.

1.5 Significance of the Study

The study might be significant as follows

a. For students the use of ICT devices has the probability of improving the standard and quality of education.

b. For teachers ICT devices make it easier for them to teach reading comprehension in EFL classes.

c. For teachers ICT devices reduce the time required by teachers to plan for lesson.

It may offer some information to other researchers who are interested to research in this area. The researcher intends to shed light on using ICT devices in teaching reading comprehension in EFL classes in secondary schools.
1.6 Methodology of the Study

The research follows an experimental approach in order to find answers to research questions and to test the hypotheses of the research using the (SPSS) Methods.

1.7 Limits of the Study

The study is limited to the administrators, teachers and students (level 1,2,3) boys and girls in secondary schools. The study concentrates on this area and level.

1.8 Abbreviations and Terms

**ICT:** Information and Comunication Technology  
**LCD:** Liquid Crystal Display  
**ESL:** English as a Second Langage  
**CALL:** Computer Assisted Language Learning  
**ISP:** Internet Service Provider  
**FB:** Face Book  
**GPS:** Global Positioning Systems  
**CD – ROM:** CompactDisc, Read-Only Memory  
**BECTa:** British Educational Communications and Technology Agency  
**PDA:** Personal Didital Assistant  
**EFL:** English Foregin Language  
**PAC:** Promoting Accelartion of Comprehension  
**OHP:** Over Head Projector  
**WWW:** World Wide Web  
**VAK:** Visual, Aurland Kinaesthetic  
**NRB:** National Reading Panel  
**SPSS:** Statistical Package for the Social Sciences  
**MFL:** Modern Foregin Language  
**IWBS:** Interactive whiteboards
CHAPTER TWO
LITREATURE REFIEW

2.0 Introduction

Information and communication technology has become, within a very short time, one of the basic building blocks of modern society. Many countries now regard understanding ICT and mastering the basic skills and concepts of ICT as part of the core of education, alongside reading, writing and numeracy. Countries must be able to benefit from technological developments. A new technology such as ICT is developed as an aid to helping to solve certain types of problems that people deem to be important. Education was not the driving problem that led to the development of ICT. However, ICT has proven to be a powerful aid in addressing a wide range of problems in education and in many other fields. A new technology creates problems. First, there are the problems of change, as old ways of addressing certain problems give way to new ways to address the same problems. Second, the new technology facilitates the identification of old and new problems that can make effective use of the technology. Many of these are problems that could not and cannot be effectively addressed by older technologies. In terms of our educational system, ICT is the basis of many problems in curriculum content, teaching processes, assessment, and teacher education. By the 2000s, with ongoing improvement and the dissemination of rapidly developing technologies, most education institutions, teachers’ and colleges promoted the use of computers within classroom settings. Using technology has become more accessible, and more widely used in educational settings. Maxwell (1998) mentions in his studies that using technology in a classroom can provide interesting ways to connect the students with the target language and culture as well as build communities of language learners around the world. Therefore, language learners can establish interaction with peers and teachers. Efficient reading is an essential pre-requisite for today's world, when there is no time to read everything leisurely and thoroughly. Creating an awareness of reading flexibility and developing the strategies for this are therefore among the most useful contributions teachers to their student's futures. Comprehension involves responding to, interpreting, analysing and evaluating texts. (NSW Department of Education and Training Literacy Continuum) when learners comprehend, they interpret, integrate, critique, infer, analyse, connect and evaluate ideas in texts. They negotiate multiple meanings not only in their heads but in the minds of
others. When comprehending, learners strive to process text beyond word-level to get to the big picture. When comprehension is successful, learners are left with a sense of satisfaction from having understood the meaning of a text. Comprehension takes the learner to a new level of active understanding and insight. It enhances language and vocabulary knowledge. Good learners use a variety of comprehension strategies simultaneously and, according to Pressley (2002), they know how to deliberately apply specific strategies to aid their comprehension, particularly with regard to challenging texts/information. There are many ways that students demonstrate their understandings of texts. They locate and recall information, draw on the knowledge of text structures and text organisers, write short reflective responses, complete multiple choice questions, think deeply and express ideas verbally, complete descriptions, recognize causal relationships, make logical connections, interpret graphics and images and identify multiple points of view and specific details.

2.1 Reading Comprehension

Reading is a conscious and unconscious thinking process. The reader applies many strategies to reconstruct the meaning that the author is assumed to have intended. The reader does this by comparing information in the text to his or her background knowledge and prior experience. Reading comprehension is a process in which the reader constructs meaning using as the building materials the information on the printed page and the knowledge stored in the reader’s head. Reading is comprehension. Comprehension is what researchers in text comprehension have applied an information-processing analogy to understanding how people think, learn, and remember what they read. When a person reads, two aspects of this “human information processing system” continuously interact. When the reader focuses primarily on what he or she already knows, this is called a concept-driven or “top-down” mode. On the other hand, when the reader relies primarily on textual features and information to comprehend, this is called a data-driven or “bottom-up” mode (Kintsch and van Dijk 1978; Rumelhart and Ortony 1977; Winograd 1977; reading is all about. Decoding without comprehension is simply word barking—being able to articulate the word correctly without understanding its meaning. Effective comprehenders not only make sense of the text they are reading, they can also use the information it contains.
Some researchers (Bright & McGregor, 1986; Irwin, 2006; Long & Richards, 1987; Willis, 1986) have posited that comprehension is an active process which involves understanding and selectively recalling ideas in individual sentences, inferring relationship between clauses and/or sentences, organizing ideas around, relating prior knowledge with those ideas, summarizing ideas, and making inferences. These processes work together and can be controlled and adjusted by the reader as required by the reader’s goals and the total situation in which comprehension is taking place. In a slight different statement, Roe et al.(1987:122-207) have clarified that the essential reading skills and abilities needed in reading content materials were summarized, among others, as follows: understanding special concepts and vocabulary; identifying main ideas and supporting details; locating facts or specific details; organizing reading material by determining sequence, drawing conclusions, and finding cause-and-effect relationship. According to Lipson and Wixson (2003) “Reading comprehension is the ability to use previously acquired information to construct meaning for a given text”.

Also, Moursund (2005:5) states:

> Reading is the construction of meaning. Without understanding, there is no reading. When we read, we pick up information and our minds work continuously to connect that information to what we already know, remember what is important, adjust our funds of knowledge to incorporate new ideas or interpret them in a different way, read “between the lines” to get at deeper meaning, and evaluate information and ideas.

When teaching reading, we teach students to develop phonological awareness, develop a strong phonics base, integrate phonics and structure, and read for comprehension. There are various levels of these definitions of reading comprehension at each grade level. As students progress through these levels, they ascend toward the goal of becoming an expert reader. Early in the twenty-first century, reading comprehension research was summarized by two “blue ribbon” groups:

A. The National Reading Panel (2000)

b. The RAND Reading Study Group (2002).

**The National Reading Panel (NRP) Described Reading Comprehension as:**

A complex process often viewed as ‘the essence of reading. Reading comprehension is intentional thinking during which meaning is constructed through interactions between text and reader. The content of meaning is influenced by the text and by the reader’s prior knowledge and experience that are brought to bear on it. Reading Study Group (2002)
notes that reading comprehension involves four components: the reader, the text, the activity and the situational context. The first three essential components—the reader, the text, and the task—occur within the fourth component of reading comprehension—the situational context. The reader is the nonfiction selections, etc.). The activity refers to what kind of comprehension task, skill, strategy, or concept the reader is attempting to perform (e.g., discovering the one doing the comprehending, and the text is the reading material (e.g., stories, author’s main idea, understanding a sequence of events, thinking about character’s intent in a story, etc). Reading skills are the cognitive processes that a reader uses in making sense of a text. For fluent readers, most of the reading skills are employed unconsciously and automatically. When confronted with a challenging text, fluent readers apply these skills consciously and strategically in order to comprehend. Every language requires a different repertoire of reading skills, based on the structure of the language and the literacy habits of the native speakers of that language.

ESL and EFL teachers, therefore, should train students in the skills that will give them the power to comprehend in English. As Brown and others pointed out, learning a new thinking process is best accomplished when the learner is consciously aware of the process, and an approach to teach reading skills should take that into account. In fact, the more students talk about their thinking processes, the more they learn. Many teachers believe that they can teach reading skills by instructing students to read a text and then showing them how to apply a variety of skills to the text for better comprehension. It is more effective for students, however, to focus on one reading skill at a time and talk about their application of that skill in a number of text samples. Eventually, students will be able to apply the skill unconsciously so that they can call it up to consciousness and apply it strategically whenever they face a challenging text.

2.1.1 Factors Affect Reading Comprehension

Duke and Pearson (2001) mention that many factors affect a student’s ability to comprehend text. These include:

a. Motivation/purpose/goals/engagement
b. Vocabulary/word knowledge/background knowledge
c. Automaticity of decoding
d. Fluent reading
e. Understanding and use of strategies employed by effective readers
f. The nature of the text itself (difficulty and interest)
g. The type or genre of text (e.g., fiction, nonfiction, poetry)
h. The amount of reading done.

Duke and Pearson (2001: 33) also mention:

As teachers of literacy, we must have as an instructional goal, regardless of age, grade or achievement level, the development of students as purposeful, engaged and ultimately independent comprehenders. No matter what grade level you teach, no matter what content you teach, no matter what texts you teach with, your goal is to improve students' comprehension and understanding.

One of the best predictors of a child’s ability to comprehend print is his or her ability to decode print.

Also Rasinski et al. (2013: 203) state:

If a student is not fluent in word recognition, he/she is thinking about the sounds of the individual letters and letter combinations rather than using that energy to make sense of the text being read. In contrast, because a fluent reader devotes little capacity to word recognition, most of his/her capacity is available for comprehension.

2.1.2 Teaching Reading Applying Theory

According to Beatrice (2008) second-language students need to learn to “think in English” in order to read effectively in English. Reading instruction needs to be based on training ESL and EFL students in new ways of talking teachers to focus on the words that will be the most useful for their students. Nation’s approach combines direct instruction, extensive reading, and multiple exposures to the same words by any means necessary to promote learning. In order to read well in English, then, students need to do the following:

a. Develop a schema of the reading process that includes the idea that reading is more than translating—reading is thinking.

b. Talk about their reading, and explain how they make sense of a text.

c. Read extensively for pleasure in English, and discuss their reading with someone who can model the literate behaviors expected in an English-language context.

d. Break the habit of reading every word by reading faster.

e. Learn to vary their reading rate to suit their purpose in reading.
f. Employ top-down processes effectively by learning to make connections between what they already know and what they are reading.

g. Learn reading and thinking skills that fluent readers of English employ unconsciously to strengthen both top-down and bottom-up processing abilities.

h. Enhance bottom-up processing by acquiring the most useful vocabulary and by learning strategies for guessing meaning in context.

i. Master the basic 2,000 words that constitute approximately 80 percent of texts in English.

j. Acquire specific reading comprehension skills they can apply strategically.

k. Putting this all together, it is clear that students will learn to read in English best in a class that includes, on a regular basis, the following components: Substantial amounts of extensive reading for pleasure, with opportunities for talking about their books with people who can model the literate skills required in English-language contexts. Focused, interactive lessons on specific reading skills, with opportunities for students to explain their thinking, and direct instruction on applying the skills strategically to a variety of texts.

Training and practice in fluency development (skimming, scanning, previewing) and reading rate improvement. Vocabulary activities that include direct instruction in high-frequency words, multiple opportunities for exposure to and manipulation of the target words, and plenty of extensive reading.

2.1. 3 Performance in Reading Comprehension

Sorrell, Bell et al. (2007: 59) find that:

Based on a computer intervention in reading, faster readers' comprehension decreased while reading via the computer under both reduced and rapid computer conditions that were related to reading independently. With the slower readers the computer (reduced and rapid rates) and independent reading conditions resulted in similar scores. No progression was found in reading comprehension.

Irausquin et al. (2002) hypothesis that: "This result might be attributed to high scores on the pretest leaving limited room for improvement".

In addition, Kerr and Symons (2006: 79) note that:

Student recalled most of the text that they read on the computer screen and much less text on printed paper. Students read the paper
text at a faster rate than the computer text, gained higher free recall scores on the computer text, and had higher comprehension efficiency scores with the paper text.

Meanwhile, Grimshaw et al. (2007) found that: the researchers concluded that higher scores resulted for retrieval and inferential questions in the narrated condition, because narration seemed to have enhanced the reading activity.

### 2.1.4 Reading Large Amounts of Time

Duke and Pearson (2001: 62) state that:

> Reading comprehension develops over time as student engage in the process. Allocating ample time for actual text reading and ensuring that student are actually reading text during that time are among the teacher’s most vital tasks in comprehension instruction.

Andreea (2007: 125) states that:

> Unfortunately, many students, especially struggling readers, often "fake it." Children must be reading and rereading books that they can read “just right” books to improve comprehension. Through extensive reading, student's vocabulary and background knowledge improve, which results in improved comprehension. However, reading comprehension is a natural co-developing process, which can (and often must) be enhanced by appropriate strategy instruction.

### 2.1.5 Time Devoted to Actual Reading

Duke and Pearson (2001:63) also agree and state:

> The time that teachers allocate for student to read should be greater than the totaltime assigned for learning about reading, and talking or writing about what hasbeen read".The reading may be silent and it may also be reading orally to a partner or an adult. Children who are struggling benefit the most from paired oral reading, feedback and discussion.

### 2.1.6 Tried – and – True Teaching Comprehension Strategies


> Metacognition, or thinking about one’s own thinking, is the umbrella under which all other strategies fall, and each strategy is a variation metacognition. Metacognition is affected by student's attitudes toward reading and their Knowledge of the strategies used by effective readers.

The numbered strategies that follow are some of the most effective:

A. Graphic organizers
Illustrate concepts and their interrelationships by using diagrams or other pictorial devices (e.g., maps, webs, charts, graphs, frames, and clusters).

**B. Semantic organizers**

Semantic maps or webs are graphic organizers that resemble a spider’s web.

**2.1.7 Teaching Reading Comprehension Strategies**

Comprehension strategies are the cognitive and metacognitive strategies readers use strategies to accomplish the goal of comprehension. Comprehension strategies are interrelated and will rarely be used in isolation. Teaching students to be good comprehenders involves providing them with explicit instruction in comprehension strategies. The following pages provide:

a. Definitions of comprehension strategies and teaching ideas.

b. Descriptions and examples of the repertoire of the super six comprehension strategies.

c. A process for explicit instruction of comprehension strategies.

d. Some teaching ideas that will support the teaching of comprehension strategies.

**2.1.8 The Difference between Cognitive and Metacognitive Strategies**

Cognitive strategies are mental processes involved in achieving something. Example, making a cake. Metacognitive strategies are the mental processes that help us think about and check how we are going in completing the task. For example, ‘Is there something that I have left out?’ Cognitive and metacognitive strategies may overlap depending on the purpose/goal. For example, as the cognitive strategies involved in making a cake proceed (following the steps in order), the metacognitive strategies assess and monitor the progress (to check that a step has not been missed). Cognitive strategies assist in understanding what is being read. For example, predicting metacognition is particularly relevant to comprehension. Metacognitive strategies allow individuals to monitor and assess their on going performance in understanding what is being read. For example, as a text is being read, the reader might think: I don’t understand this. I might need to re-read this part.
2.1.9 Effective Reading Comprehension Strategy

All comprehension mini-Lessons—shared, read-aloud, and guided reading—should focus on teaching students to: Duke and Pearson (2001)

a) Identify their purpose for reading.
b) Preview text before reading.
c) Make predictions before and during reading.
d) Activate relevant background knowledge for reading.
e) Think aloud while reading.
f) Use text structure to support comprehension.
g) Create visual representations (make pictures in their heads).
h) Determine the important ideas in the text.
i) Summarize what they read.
j) Generate questions about text.
k) Handle unfamiliar words during reading.
l) Monitor their comprehension during reading.
m) Use fix-up strategies.

2.1.10 Assessing Reading Comprehension

Comprehension is a mental process; it can only be observed and assessed indirectly. We can not get inside a reader’s head to observe comprehension, but we can infer comprehension strategies or make them more visible.

According to Rhodes and Shanklin (2013) listening and reading comprehension can be inferred and assessed through:

a) Oral or written retellings.
b) Read-a louds and think a louds.
c) Answering questions.
d) Running records.
e) Filling in missing words in a cloze.
f) Group discussions (e.g., book clubs, Author’s Chair).
g) Peer and self-assessments questionnaires.
h) Interviews.
i) Audiotapes of student’s reading.
j) **2.1.11 Teaching Reading Comprehension Strategies Effectively**

According to Beatrice (2008) students listen to read-a-louds and shared readings. Many students hear words, phrases, and sentences, but don’t make the connections. They hear peers respond to questions or make comments but do not understand how they are making sense of the text. “I look at their heads and wonder what is happening in there,” one student struggling with comprehension reportedly said of good comprehenders. Again, comprehension is a thought process that happens inside the head. It must be taught. The most effective method for teaching comprehension students listen to read-a-louds and shared readings. Many students hear words, phrases, and sentences, but don’t make the connections. They hear peers respond to questions or make comments but do not understand how they are making sense of the text. “I look at their heads and wonder what is happening in there,” one student struggling with comprehension reportedly said of good comprehenders. Again, comprehension is a thought process that happens inside the head. It must be taught. The most effective method for teaching comprehension strategies is the think-aloud.

Nell Duke and David Pearson (2001) suggest that when teachers examine their own classrooms they should consider whether students are being taught the full range of effective reading comprehension strategies. The following questions will help teachers to develop an overview of their classrooms. Are student being taught to:

- a) Identify their purpose for reading?
- b) Preview texts before reading?
- c) Make predictions before and during reading?
- d) Activate relevant background knowledge?
- e) Think aloud while reading?
- f) Use text structure to support comprehension?
- g) Create visual representation to aid comprehension and recall?
- h) Determine the important ideas?
- i) Summarize what they read?
- j) Generate questions for text?
- k) Handle unfamiliar words?
- l) Monitor their comprehension?
- m) Use appropriate fix-up strategies?
- n) Does instruction about strategies include:
o) Explicit description of the strategy and when it should be introduced?

p) Modeling of the strategy in action?

q) Collaborative use of the strategy in action?

r) Guided practice using the strategy, with gradual release of responsibility to the student?

s) Independent practice using the strategy? Teachers might also ask themselves the following question:

Are students being helped to orchestrate multiple strategies at a time?

Comprehension strategies are the cognitive and metacognitive strategies readers use to accomplish the goal of comprehension. Comprehension strategies are interrelated and will rarely be used in isolation. Teaching students to be good comprehenders involves providing them with explicit instruction in comprehension strategies. The following pages provide:

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iv. Some teaching ideas that will support the teaching of comprehension strategies.

2.1.12 Effects of ICT in Teaching Reading Comprehension

ICT is affecting how reading is being taught in secondary schools. Teachers are integrating commercially available programs into the reading curriculum. Yunus & Salehi, (2012:106) state that: "The use of ICT in English as a Second Language ESL teaching and learning is one of the most widely discuss issues in the field of education".

A group of ICT researchers claim that: "Using ICT improves education and provides more teaching and learning supports for the teachers and learners". There is no doubt that using ICT in education improves teachers’ instructional process and facilitates students’ learning process. A great number of studies have shown the advantages of using ICT in ESL teaching and learning; however, there is a need for more studies on the disadvantages of using ICT in language education.
2.1.13 Developing Reading Comprehension Intervention


Over the past 5 years, we have engaged in a series of design experiments and randomized control trials to develop and test the efficacy of an intervention, promoting acceleration of comprehension and content through text, designed to improve text comprehension and content learning.

The PACT intervention consist of five components of instruction that focus on improving comprehension through text reading, connecting new knowledge to unique problem – solving activities completed in cooperative groups. These components were designed to meet he needs of students with a wide range of abilities, although they were not designed with their inclusion in the general classroom in mind.

2.1.14 Problems Associated with Reading Comprehension

There are two pedagogical problems faced English teachers when they teach reading comprehension in secondary schools: (English teaching forum 1994:7)

a. The first problem is the student participation. This problem concerns the actual participation of all students in reading activities set by teachers what happens all too often in large classes when answers to comprehension tasks are give orally, is that activity is dominated by small minority of the best students. Most of the class doesn't ever have enough time to finish reading .The best way to solve this problem is to reduce students number in classroom, so as to enable teachers' to know student's problem with reading comprehension and solve it.

b. The second problem is accuracy and fluently.Better labels might be reading for accuracy and reading for fluency; these are certainly more information but still do not reflect all the purpose several by each type reading. Teachers cannot stress correctness without inhibiting fluency , and students in large classes whose spoken English is weak will be handicapped in given oral answers to reading comprehension tasks, even if they have got the right answers.

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The following pages provide:

- Definitions of comprehension strategies and teaching ideas
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- A process for explicit instruction of comprehension strategies.
- Some teaching ideas that will support the teaching of comprehension strategies.

### 2.1.15 Reading Comprehension and Strategies

The skills of reading comprehension must be taught in a carefully planned sequence. According to Nuttal (1982) strategies of reading that teachers hope students will be learnt through their exploitation of texts:

- Skills of utilizing information that is not strictly speaking part of the text itself, reference apparatus, graphic conventions, illustrations and diagrams.
- Word–attack skills, how to tackle unfamiliar lexical items by using morphology, inference from context, or by using a dictionary.
- Text attack skills, the process of interpreting the text as a whole, using all the clues available including cohesion and rhetorical structure.

### 2.1.16 Kinds of Comprehension Strategies

#### A. Extensive Reading

Extensive reading means reading slowly and for long hours adding knowledge and information. Extensive Reading refers to the outside reading students do on their own without help or guidance from teacher. Extensive reading is a highly individualized approach to reading improvement. Students select their own books and read at their own pace. The teacher should guide students to select books at a level of comprehension that allows for “comprehensible input” (Krashen). The emphasis is on the quantity of books read and the students’ enjoyment of their books. Students are never tested formally on their extensive reading. However, they are required to talk about the books they read in structured activities, including book conferences with the teacher, brief oral reports to the class, and discussions in small group settings. Day and Bamford (1998) have documented the benefits of extensive reading, which include:

- Development of a positive attitude toward reading in a second language.
- Motivation to read more. Increased reading fluency. Gains in vocabulary and grammar knowledge.
c. Improvement in writing in the second language. According to Day and Bamford (2005), extensive reading can be included in a second-language curriculum “as a separate course; as part of an existing reading course; as a non-credit addition to an existing course; and as an extracurricular activity (1998: 41).

Smith (1964: 97) points that: "Students learn to read by reading and the objective of extensive reading is exactly that to learn reading by reading”.

Paulston (1776: 199) states: "students should begin to read extensively as soon as they can possibly manage; usually this will be at the advanced beginning stage ideally they should be reading books that test out at the independent’ level’. Extensive reading could lead to a significant improvement in learner's reading speed and the role of graded readers in programs to promote such reading has an even longer history. Early work on reading speed tended to focus on the development of techniques to help learners to read faster, and failed to recognize the importance of varying the speed according to the reader's purpose in approaching a text. Such techniques as have been employed on speed reading courses also tend to cause readers to suffer lower levels of reading comprehension.

B. Intensive Reading

Intensive reading means reading slowly examining every parts of the text as reading for examinations.

Nuttal (1982: 23) says:

Intensive reading involves approaching the text under the close guidance of the teacher or under the guidance of a task which forces the student to pay great attention to the text. The aim of intensive reading is to arrive at a profound and detail understanding of the text.

C. Skimming Reading

Skimming means glancing rapidly through a text to determine its gist, hyland (1990: 16) states: "Skimming involves knowing which parts of a text contain the most kinds of reading, therefore, it requires knowledge of text structure”. To skim correctly, it is necessary to know the various organization patterns of writing thus when students skimming is limited by the type of material, as well as student's skimming a newspaper article or story it is always advisable to concentrate on the opening sentences. The effectiveness of skimming is limited by the type of material of material, as well as knowledge and experience with the subject matter.
D. Scanning Reading
Scanning means glancing rapidly through a text either to search for information or the general impression, Hyland (19970: 17) mentions: "scanning is a useful skill for data gathering, review, using reached books, or judging whether a text contains material deserving further study"
State of New South Wales through the NSW Department of Education and Training, (2010) states that there are super six comprehension strategies:

a. Making Connections
   i. Learners make personal connections from the text with something in their own life (text to self).
   ii. Another text (text to text).
   iii. Something occurring in the world (text to world).

b. Predicting
Learners use information from graphics, text and experiences to anticipate what will be read/viewed/heard and to actively adjust comprehension while reading/viewing/listening.

c. Questioning
Learners pose and answer questions that clarify meaning and promote deeper understanding of the text. Questions can be generated by the learner, a peer or the teacher.

d. Monitoring
Learners stop and think about the text and know what to do when meaning is disrupted.

e. Visualising
Learners create a mental image from a text read/viewed/heard. Visualising brings the text to life, engages the imagination and uses all of the senses.

F. Summarising
Learners identify and accumulate the most important ideas and restate them in their own words.

2.1.17 Reading Speed and Comprehension
There is no doubt that reading speed and reading comprehension are closely linked. A very slow reader is likely to read with poor understanding if only because his memory is taxed, the beginning of paragraph, or even a sentence – may have been forgotten by the time he has struggled to the end of it. But it is not clear which cause and which effect (do students read quickly because they understand easily or do they understand easily because of the speed with which they read? Gates (1921:42) states: "reading and comprehension and
speed are two distinct, but related factors, both of which should be included in a reading programme”.

There are three factors that need to be considered when discussing reading speed:

The **first** factor is, not every thing can be or should be read quickly. Because how fast students read depend on their purpose of reading. The **second** is, in reading speed student has to do with his familiarity with the material .The **third** factor is, in reading speed students read more slowly than they need to.

### 2.1.18 Some Approaches to Improve Reading Speed

**A. Machines**

According to Nuttal (1982:53) "Sophisticated machines have been designed which force students to read at a given rate, without regressions, by exposing the text only briefly, abit at given rate. But most of teachers do not have access to such equipment and it is generally a greed to be unnecessary”.

**B. Slides and OHP**

Slides and over head projector transparent many advantages for teachers of readings comprehension:

a. The projected text holds students attention and improves their concentration.  
b. They may be able to spot students with problems such as eye movement head head movement and so on.  
c. Students have no alternative but to wean themselves from the habit of using finger as a pointing device.  
d. It is impossible for students to refer to a dictionary during the presentation, because using a dictionary slows the reading speed.  
e. It is easy to move a mask on the (OHP).  
f. Teachers can control the sequence in which students understand.

### 2.2 Vocabulary Development

**A. Teaching Vocabulary**

When teachers are preparing to teach a reading passage, the first task is to identify new vocabulary and decide how to handle it. They must make a decision about each word separately.

According to Doff (1988) there are some techniques for teaching new vocabulary:

a. Say the word clearly and write it in the board.  
b. Get class to read words in chorus.
c. Translate the word into students' own language.
d. Ask students to translate words.
e. Draw a picture to show into students' own language.
f. Give an English example to show where word is used.
g. Ask questions using new word.

B. Teaching the Meaning of the New Vocabulary

Students cannot always be accepted to infer the meaning of new vocabulary by themselves, especially if there are several new words in a sentence. Teachers will therefore have to teach a lot of new words which students come across.

There are three methods of teaching new vocabulary:

i. Demonstrating the meaning, by using pictures, objects or acting.

ii. Translating words into the mother tongue.

iii. Explaining words in English by paraphrasing.

According to Thonis (1970: 69)

*Reading Vocabulary is also built through the use of meaning clues which may be applied to unknown words and which may help students to discover a word in a specific context.*

Reading comprehension depends on vocabulary knowledge and vice versa. The more students read, the better their vocabulary becomes. And the more vocabulary they know, the better they can read. Direct teaching of vocabulary should constitute about 25 percent of a vocabulary program. Instruction should be planned so that the students encounter a new word at least seven or more times in meaningful contexts. Nation (2001). To motivate students, it is important to explain the usefulness of mastering the high-frequency words and how that will improve reading comprehension. In addition to direct instruction, teachers can do a lot to enhance vocabulary building. They can teach students to:

a) Study and learn words effectively.
b) Choose new words they want to learn.
c) Use a dictionary.
d) Keep a vocabulary notebook—with sentences, syllable.
e) Break-downs and definitions.
f) Make and use word study cards.
g) Review their word study cards—alone, with a partner, and in class. Use Web pages, such as www.lextutor, to find out more about words and collocation from concordances.

2.3 Multimedia for Vocabulary- Building

Multimedia is not used only for glossing texts. Multimedia is a central component of good computer-assisted skill-building software. Chanier and Selva (1998) stressed the benefits of multimedia support for learning L2/FL vocabulary and presented a lexical learning environment for French as a L2/FL, which includes a corpus of texts, a general and a personal dictionary, and a lexical activities unit. After reviewing various viewpoints about the effectiveness of multimedia for vocabulary learning, they propose useful criteria for evaluating the quality of a visual representation in a lexical environment. Groot (2000) presented another multimedia-enhanced computer-assisted word acquisition program, whose aim was to speed up the vocabulary acquisition process. This program is an interactive program that takes learners through different stages of vocabulary development: deduction, consolidation, and long-term retention. Similarly, Tozcu and Coady (2004) conducted a case study that examined the outcomes in vocabulary acquisition when using interactive computer-based texts as opposed to traditional materials. The aim was to determine the effect of direct vocabulary instruction via computer assisted learning as opposed to traditional vocabulary training via print texts. Moreover, the effect of this direct instruction on reading comprehension and word recognition speed and therefore reading rate were also analyzed. The subjects of the study were 56 intermediate level students from various L1 backgrounds who were studying English for university academic preparation. The results suggested that the treatment group, who used a tutorial computer assisted courseware, out performed the control group in all the three analyzed areas: vocabulary knowledge, reading comprehension, and reading speed. These results suggest positive implications of integrating technology in the language classroom for reading instruction and vocabulary development.

2.4 What is ICT?

ICT stands for information and communication technology. ICT refers to technologies that provide access to information through telecommunications. It is similar to information technology (IT). This includes the internet, wireless networks, cell phones, and other communication mediums. ICT is a major challenge to our education system. The initiatives to introduce ICT into schools in the1990s were accompanied by national
programmes of staff development which aimed to develop confidence and competence in the workforce. These programmes were resourced through new opportunities funding (NOF) and often involved attendance at a series of staff development sessions which focused primarily on developing technical competence and understanding rather than on pedagogical principles.

Yunus, L. et al. (2009:125) state:

*Information and Communication Technology is widely known as ICT is not something new nowadays. We are all living in the decade of multimedia and the millennium of the Internet and the World Wide Web WWW.*

Somehow or rather, ICT appears to be a force which has changed lots of aspects in life. It influences business field as well as the trade, marketing science, entertainment and most importantly, the education field. In fact, computers and ICTs are things we cannot do without today and in the future. In the education field, ICT is applied in assisting students to be more effective in their learning. In fact, it aids the teachers in doing the administrative works efficiently. The concept of ICT in education is seen as a system that enables information gathering, management, manipulation, access and communication in various forms:

a) ICT is for all students. ICT is used as an enabler to reduce the digital gap between the schools.

b) ICT is used as a teaching and learning tool, as part of a subject, and as a subject itself.

c) ICT is to be used to increase efficiency, productivity and effectiveness of the management system.

Simmons & Hawkins, (2009) also state:

* ICT is very prominent as it provides lots of medium for the teachers and the students to explore and enhance the teaching and learning process. ICT is seen as a skill for life, now as important as being literate and numerate.*

This implies that one without the ICT skill is a person who is left behind and needs to adapt to the changes. It should be noted that living in the 21st century requires an advanced and systematic tool, which can foster a better and more conducive learning process. Bakar, R. et al, (2008 ) mention that : ‘The educators’ role in schools to ensure the teaching and learning process to be executed in par with the current development is
Indeed needed. By integrating the ICT in the education system the standard indirectly will be increased”.

Daniel (2013) defines ICT as: "The combination of informatics technology with other, related technologies, specifically communication technology". In the past few decades, information and communication technologies have provided society with a vast array of new communication capabilities. For example, people can communicate in real-time with others in different countries using technologies such as instant messaging, voice over IP, and video-conferencing. Social networking websites like face book allow users from all over the world to remain in contact and communicate on regular basis. Modern information and communication technologies have created a "global village," in which people can communicate with others across the world as if they were living next door. For this reason, ICT is often studied in the context of how modern communication technologies affect society. In recent years there has been a grounds well of interest in how computers and the internet can best be harnessed to improve the efficiency and effectiveness of education at all levels and in both formal and non-formal settings. But ICTs are more than just these technologies; older technologies such as the telephone, radio and television, although now given less attention, have a longer and richer history as instructional tools. For instance, radio and television have for over forty years been used for open and distance learning, although print remains the cheapest, most accessible and therefore most dominant delivery mechanism in both developed and developing countries. The use of computers and the internet is still in its infancy in developing countries, if these are used at all, due to limited infrastructure and the attendant high costs of access.

2.4.1 Exploring ICT Aspects of a Teacher's Expertise

Intrinsically and extrinsically motivated to be a good teacher. As a preservice or inservice teacher, are faced by the challenge of gaining an appropriate level of expertise in teaching the various disciplines you teach. What constitutes an appropriate level of expertise? This is not an easy question to answer. Research tells us that the effectiveness of a teacher depends on a number of different things, such as the listed below.

a. Curriculum; content knowledge of the disciplines being taught.

b. Pedagogy; knowledge and skill in teaching the discipline assessment; knowledge and skill in assessment.

c. Classroom management knowledge and skills.
d. General communication skills.

e. Continued professional growth; being a life long learner. ICT is now part of the content of each discipline that you teach or are preparing to teach.

ICT is an aid to teaching any discipline, and ICT is an aid to assessment in any discipline. ICT tends to be an added classroom management burden, whether computers are located classroom or take students to a computer lab. ICT is a useful aid to communicate with parents, fellow educators, and students. ICT provides a number of aids to learning, both for teachers and for their students. ICT is now a significant component of many different aspects of one’s expertise as a teacher.

2.4.2 ICT and the Quality of Education

It is a mistake to think that new ICT applied will automatically raise the quality of education. According to Piet, K. et al (2005) the crucial lesson from the past ten years of experimenting with new learning tools in secondary education is that educational ICT media are a temptation for the traditional test regimes at schools, conclude that “learning by assimilating the teacher’s knowledge and preferences” is the most appropriate and efficient approach to attain traditional schooling criteria, not necessarily the learning modalities of tomorrow (Kinelev, 2003). It goes without saying, that the emergence and successful development of the societies are impossible without the improved quality of individuals’ education, consequently, the improved quality of education of a given society as a whole. As there is no universal formal definition of the term “quality” in education include the following abilities of an individual:

a. Keeping abreast with the modern ideas and discoveries in the areas of science and technology.

b. Acquiring skills required by the latest technologies.

c. Developing one’s resources through self-education.

So, scientific knowledge and Professionalism as products of quality education must facilitate a successful participation of an individual in the development of evolving societies.
2.4.3 Course Development on ICT Skills

All the personal computer is penetrating the daily life. This is the reason why a shorter time must be spent to master an operating system and its applications like Word and the internet browser. Piet, K. et al (2005). More time is required to known how to stay focused during querying, reporting, and publishing on the WWW. Rather than explicit instruction, groups of students (of three or four) will undertake project activities and will compensate for the lack of certain skills. It is, therefore, desirable to assemble groups of diverse compositions so that mutual learning may take place. A desktop has been accompanied (and partly supplanted) by a laptop and, in its turn, by a PDA (Personal Digital Assistant), or a mobile telephone. As media have become a commodity, their interfaces have become user-friendlier, demanding less explicit efforts to be introduced. One of the logistic advantages of the PDA is that computer classes can’t be overbooked. The time will come soon when students will personalize computers at schools always have the documents, bookmark lists, and shortcuts on them. Once a PDA is synchronized, the documents relevant for studies will be ready for mobile use. PDA’s usage will be propagated among peer groups like the ambience of youngsters learning to use a mobile or operate a TV.

2.4.4 Use of ICT in Teaching and Learning

ICTs use in schools pre (2000) can be broadly depicted as supporting drill or practice in previously taught skills or concepts, as assistive technologies for pupils with special needs and/or as a treat or reward when work was completed satisfactorily. There was little collaborative work and pupils tended to work individually on the class computer in the corner of the room. Given the novelty value of computers in the 80s and early 90s, and limited access out of school, access to a computer was perceived as motivating in it and used to promote pupil engagement in the learning process and ease classroom management in a relatively crude manner. A simple-minded description of a school is that it is a place where “teachers teach and students learn. David (2005) state: it is easy to understand why schools became places where people came together to learn and that human teachers facilitated the learning. Books were expensive and not readily available. There were relatively few well-educated scholars and teachers. Thus, people wanting to learn tended to come to places where there were books and scholars. David (2005) there is lots of ways to translate this collected knowledge into practice. For example, curriculum content, aids to instruction, and assessment instruments can be developed that reflect this knowledge. These materials can be widely distributed. Another common approach is
through preservice and inservice education of teachers. Continuing staff development is continued to be a crucial component of our overall educational system. ICT brings us some very powerful new aids to translating theory into practice.

At the same time, ICT is said to enable teachers to save time and to increase productivity in such activities: (UNESCO (2005)

a. Preparing and updating daily lessons.

b. Plans, making hard copy visualisations and handouts for classes, as well as individualised educational plans for slower students and students with or with special problems.

c. Presenting visual/oral content materials, tasks, and questions to the audience; maintaining grade books.

d. Compiling a data bank of exam questions.

e. Online inspection and correction of students’ work on their computers; and keeping records, chronicles, and archives of all the above-mentioned events and proceedings with fast retrieval and easy access to any entry. In addition, as ICT becomes more pervasive, computer-based equipment is integrated into every aspect of a school’s operation, having thus an impact on the whole school operation and development.

2.4.5 ICT Availability

Telephones and TV are readily available in most households. Teachers are used to the idea that books are less used to the idea that computers with internet connectivity have become a common household item. Here is some data quoted from a newspaper article (Mercury News (2003). In 2002, 83% percent of American family households (with at least one child aged 2–17) owned a computer, and 78% percent of children lived in a home in which either they or a parent used the internet from home (Connected to the Future). About 90% percent of people ages 5 to 17 use computers and 59 percent of them use the Internet -- rates that are, in both cases, higher than those of adults. Even kindergartners are becoming more plugged in: One out of four 5-year-olds uses the internet.
2.4.6 ICT Provision and Access

In recent years there have been numerous surveys designed to give information on the extent to which schools are developing the capacity to integrate ICT into learning, teaching and management processes. The evidence gathered has shown a steady increase in the number of computers and other technologies over time, with most schools achieving the baseline targets for computer-to-pupil ratios. This finding, to a degree, masks considerable variation within and across schools with regard to regular access to reliable technologies and broadband connectivity. Evidence of the impact on learning and teaching indicates that, where the use of ICT is most effective in enhancing the learning experience, teachers have been able to integrate a number of technologies such as laptops, interactive to the provision of more relevant and appropriate staff development opportunities. The newer programmes, such as Hands on Support (DFES, 2004) and Masterclass (Granville et al., 2005), are more flexible and targeted than before and there is a wider range of ways of learning about the new technologies and their implementation, including through the use of ICT itself. As a result, teachers – and school leaders – are able to identify the kind of training they want and need as well as how they can acquire it. Trainee teachers and the teacher educators have differing needs and these are beginning to be addressed. Teachers’ skills in working with ICT have developed significantly over the years and they are using ICT to support a range of planning and administrative activities at both class level (in planning and preparation and report writing, for example) and school level (in attendance and assessment records, and timetables amongst others). There is some evidence that, as teachers have acquired and developed ICT skills and confidence in using the technologies, they have experienced a reduction in some aspects of their workload.

2.4.7 Using ICT

According to Steve K. et al. (2003) the sheer amount of material which can be made available to pupils – information, structured learning material, and data which can be handled – is immense, and can be obtained just as easily from anywhere in the world as it can from the classroom cupboard. Care must be taken to check the validity of the information obtained, however. ICT gives teachers and pupils access to and control over situations which would normally be outside their everyday experience. ICT devices are used for:
A. **Speed and Automaticity**

ICT enables routine tasks to be completed and repeated quickly, allowing the user to concentrate on thinking and on tasks such as analysing and looking for patterns within data, asking questions and looking for answers, and explaining and presenting results.

B. **Provisionality**

ICT allows changes to be made easily and enables alternatives to be explored readily. The fact that pupils can try out ideas and change them if they look bad or before they receive negative comments from the teacher is a tremendous stimulus to creativity and the taking of risks that often lead to effective learning. For many pupils with poor literacy skills, just putting pen to paper is a risky business, and ICTs make a significant difference to the quantity and quality of written work produced.

C. **Interactivity**

ICT enables rapid and dynamic feedback and response, which can improve pupils’ willingness to evaluate and improve their work as well as a voiding a wait for the teacher to give feedback and encouragement. It is this feature that perhaps contributes most to pupils’ feeling of control over their learning and involvement in their work with ICT.

2. **4.8 ICT in Secondary Schools**

According to Mariyn and Pachler (2014: 16) the ICT resources in the school, usually were concentrated on computer room. In many schools it was then seen as natural to give this person the responsibility for coordinating ICT as a resource for teaching and learnings in addition to their responsibility for teaching the subject discipline of ICT. However, although the roles of ICT specialist and ICT coordinator are closely linked, and indeed often have a high degree of overlap in some curriculum models, they have distinct purposes and are often separated in large secondary schools. The role of the ICT coordinator is a school-wide responsibility that may involve the development of ICT as a tool for teaching learning as well as the development of the ICT Key Skill. The nature of this wider whole school responsibility has often led head teachers to reject the head of the ICT department for this role, placing greater emphasis on interpersonal skills than technical expertise. Indeed, the role is sometimes seen to be of such significance that it is taken on by an assistant head teacher who is designated as ‘Director of Studies’, with responsibility for developing and extending the nature of teaching and learning in the school.
The precise responsibilities of the teachers involved depend on the model of curriculum organization chosen for the teaching of ICT. In broad terms, models of delivery are either cross-curricular or discrete. In the former model, ICT knowledge, skills and processes are taught through other subject areas whilst, in the latter, pupils attend separate, discrete lessons in ICT. Cross-curricular models vary in the degree to which ICT is integrated into the schemes of work of the subjects through which it is taught. In some versions, ICT is fully integrated, in others it is only hosted and taught as a distinct series of lessons which otherwise make few links with the host subject. Smith, (1998:20 )states: “developed preferred ways of using our senses to process new some of us prefer to use our eyes, others prefer to listen, and a third group prefer to touch and move things”. According to Steve. K. etal (2003) developed preferred ways of using our senses to process new information. Some prefer to use our eyes, others prefer to listen, and a third group prefers to touch and move things. Smith (1998) also mentions: these three main ways of thinking – visually, aurally and through physical activity have been used to characterise different preferences for learning:

A. Visual
Visual learners find it easier to take in new information through pictures, diagrams, charts, films, and so on.

B. Auditory
Aural learners find it easier to take in new information through the spoken word

C. Kinaesthetic
Kinaesthetic learners find it easier to take in new information through copying demonstrations and physically manipulating things. It is thus important when planning lessons to use a multi-sensory approach, to ensure that we allow the pupils an opportunity to gain knowledge through Visual, Aural and Kinaesthetic means (from now on referred to as VAK. This is not the only classification of learning styles; see Capel et al., (2001: 5-1).Your own learning style will differ from those of your colleagues; for instance, you may find it very easy to transfer your skills from one software application to another whilst a colleague can more easily see different or new applications of a software tool than you can. It is thus important for you first to analyse your own preferences. This will have benefits in two ways:

a. You may be able to improve your own learning effectiveness by focusing on the methods you find most fruitful.
b. You will gain awareness that your own learning style may not match those of many of pupils.

2.4.9 Scope of ICT in Secondary Schools

Maxwell (1998) indicates that technology can improve student motivation as well as enthusiasm for language learning. The most important part is that technology transforms a teacher-centered classroom into a learner-centered classroom.

Steven .k.et al. (2003:93) also mention ICT is defined for curriculum purposes as:

*The range of tools and techniques relating to computer-based hardware and software, to communications including both directed and broadcast, to information sources such as CD-ROM and the Internet, and to associated technologies such as robots, video-conferencing and digital TV.*

This offers a very broad scope for ICT in terms of the tools which might use in schools. The pedagogical aims of ICT are defined equally broadly and include a wide range of purposes aiming to develop. Also Steven .k.et al. (2003:93) mention:

*The knowledge skills and understanding needed to employ ICT appropriately, securely and fruitfully in learning, employment and everyday life. As with any change in terminology there will be exceptions. Thus qualifications in this area continue to have the title IT, including in particular the IT Key Skill.*

Accordingly, integrating technology into language learning could promote this concept since technology could help language learners to apply what they learned in authentic situations.

2.5 Potential of Digital Technology for Learning

Technology can be seen to possess potential, for example, to liberate users from routine. According to Marilyn (2014) technology can be seen to possess potential, to liberate users from routine tasks and empower them to focus on creative and cognitive, rather than procedural, aspects of tasks such as writing. It also makes available vast amounts of information, the ability to produce and disseminate such information and not just use and consume it. It enables networking and immersion in virtual worlds and much more. These and other possibilities are, however, not unproblematic, as they can be seen, potentially at least, to deprive learners of real, first-hand (multi-sensory) experiences at the cost of simulations and models. Norbeter (2015) Also, the quality of an artefact can easily become more important than the processes involved in creating it or the quantity of
information can easily be misconstrued for quality of experience. In short, the potential of
digital technologies and their affordances for learning informal contexts frequently need
to be harnessed by teachers, as often, and the work of formal contexts frequently need to
be harnessed by teachers, as often, and the work. Charles Crook (2012) exemplifies this
clearly; tensions exist between the cultural and media practices of young people in
everyday life and those valorised by the socio-cultural settings of schools. McFarlane
(2001) provides a number of reasons why a systematic engagement with technology is
valuable and important. She abstracts the following generic traits and specific educational
benefits of technologies from research such as:

a. Learner enthusiasm.
b. Learner confidence.
c. Cognitive processing speed.
d. Concentration.
e. Range of writing forms used.
f. Quality of revisions to writing.
g. Spelling and presentation in writing speed of learning.
h. Information handling skill.
i. Critical thinking.
j. Ability to organise and classify information.
k. Improved reading and comprehension.
l. Learner autonomy, leading to improved motivation and improved learning.
m. Transformed power relationships in learning, leading to benefits for the learner.

2.6 Developing ICT and Teaching Skills

Teacher's ability to control students can be largely influenced by the layout of the room.
If you are in the centre, there are always going to be students who are behind you; if you
are going to have to move around continually so that there are only a few seconds when
any pupil is out of sight. Steve.K et al; (2000) consider where in the room you can see all
the pupils, and they can see you. If, for example, there are two pupils behind an island,
consider moving them for the purpose of a demonstration, whole-class questioning or
board work. When you turn to the board or to help a pupil with a problem try to make it
on the side with the least number of pupils, try different stances when dealing with a
problem on a computer or writing on the board. Preparing work in advance for an
overhead projector (OHP) or data projector will mean that you can face the class
continuously. Make sure that you do not have to bend down or turn to operate the OHP, mouse or keyboard. You cannot keep an eye on every pupil every second of the lesson, but you will need to at least give the impression that you are doing exactly. Try to make eye contact as soon as a pupil looks up, switching quickly between pupils in order to give this impression, and address comments to pupils in different parts of the room without moving. If you are working with a particular pupil, you will find it easier to keep an eye on the whole class if you stoop down next to the pupil. Make a point of commenting to pupils who are in the distance or behind you frequently. Bags, coats and books all need to go somewhere, particularly on a wet day during the winter. If you intend to separate pupils who can be disruptive when together, it is often useful to move around so that pupils are unable to ‘hide’. In a classroom situation it is useful to be able to stand behind the back line of pupils, as the pupils are unsure of where you are and are less likely to misbehave.

2.7 Benefits of ICT in Schools

The benefits of integrating ICT in teaching and learning could be pedagogical and/or administrative. From the pedagogical point of view, one of the most important goals for introducing ICT in schools is to enhance teaching and learning practices.

Higgins (2003: 45) says:

*The use of technology allows a more efficient way to develop aspects of learners’ thinking than would be achieved when employing traditional teaching practices. These areas include facets such as reasoning, understanding and creativity.*

Furthermore, capabilities such as comprehension and problem solving can be better learnt using interactive media; this further justifies the integration of ICT into the classroom. Keong, H. et al (2005:43) also note that:

*ICT supports constructivist pedagogy, wherestudents use technology to explore and reach an understanding of concepts. This approach [constructivism] promotes higher order thinking and better problem solving strategies.*

However, in order to effectively take advantage of the benefits of the integration of ICT within the curriculum and within the different subject areas, there has to be a shift from the traditional methods of teaching. New innovative forms of teaching have to be embraced in order to effectively maximize the integration of the technology (Hennessy & Deaney, 2004). ICT can also improve the efficiency of school administration functions
Storing data electronically makes more data available for collaborative work, and decreases the educator's time expended on administrative functions. This allows educators to focus on critical activities such as lesson planning and other relevant teaching activities. The use of ICT can also increase transparency. For example, assessments conducted using computers leave little room for manipulation of the grades by the marker, hence increasing the reliability of data. Kozma (2008) states: "the impact of ICT on education is not automatic. Combining ICT with effective pedagogy could be a daunting task for some institutions." Jung (2005) also mentions that if not well adopted in the school, the educators may view the use of ICTs for curriculum delivery as an add-on and not as an integral part of teaching and learning. According to Chigona, Chigona & Davis (2010) therefore, there is a need to understand the factors that affect the process through which teachers integrate ICTs in teaching, to the point where the technology becomes spontaneously integrated into their teaching and learning process.

**2.8 ICT and Reading**

Integrating computers and the internet technology in the foreign language classroom is a subject of great debate. Most research findings in the field of ICT reveal promising results about the use of computers and internet in EFL reading. Kim (2008) assumes that these technologies can provide “both ESL/EFL teachers and students with virtually boundless uses” Kyeung Kim (2008:242). CALL (Computer Assisted Language Learning) has nowadays become a common feature of most EFL classrooms. A wealth of research, Jonassen, et al. (1999) stress the great benefits CALL has in increasing students’ interaction (in the target language) in the form of exchanging, discussing and negotiating utterances and information to construct their knowledge about the target language. For Harmer (2007) computer-based instruction can also provide students with unreachable and fascinating activities which motivate them. Ybarra and Green (2003) state that: "Computers can provide added practice when necessary. In addition enable students to engage with materials in authentic environments and to integrate various language skills and usage". With particular emphasis on the reading classroom, Case and Truscott (1999) stress the importance of computers and the internet as good sources in developing reading skills. They argued that computer-based reading helps increase students’ interaction with texts, attention to individual needs, and increases independence through an ability to read texts they would not otherwise be able to read. It also helps them improve their sight word
vocabulary, fluency, and comprehension which are crucial for improving reading. Similarly, AlKahtani (1999) comments clearly supported the idea that computer-based instruction facilitates students’ that previous research about the use of computers for reading instruction reading comprehension and increases their reading speed such as studies conducted by Kulik, et al (1983). Moreover, Pérez, Correa et al (2004) provide guidelines for successful computer-reading instruction in the classroom:

a) Computer instruction in reading should focus on meaning and stress reading comprehension.

b) Computer instruction in reading should support and extend students knowledge of text structure.

c) Computer instruction in reading should make use of content from a wide range of subject areas.

d) Computer instruction in reading should link reading. Earlier it was highlighted that there may be an impact on the roles that students play in the learning environment. This will suit some students and may not be comfortable for others. Also while most students tend to become more engaged or motivated when using ICT, this is not the case for all students.

2.9 Teachers’ Knowledge of the Potential of ICT in Education

Margret (2003) state that in spite of teachers often being limited by the ICT resources available to them, there are many examples in the literature of teachers having a good understanding of a particular resource. However, very few teachers have a comprehensive knowledge of the wide range of ICT resources now available in education. This means that their pupils are not given all the learning opportunities which ICT could provide.

2.10 Teachers’ Confidence in Using ICT

Teachers are confident in their chosen uses of ICT. According to Margret (2003) few teachers are confident in using a wide range of ICT resources, and limited confidence affects the way the lesson is conducted. Many teachers still fear some forms of technology, which prevents them making much use of them in their teaching.
2.11 Pedagogy beyond the Classroom

The pedagogical practices of teachers using ICT can range from only small enhancements of practices using what are essentially traditional methods. According to Margret (2003) despite the need for a new pedagogy with ICT, including at times moving to a facilitator role, teachers still need to adopt a leadership role in the planning, preparation and follow-up of lessons. Where little planning has occurred, the evidence shows that the pupils’ class work is unfocused and leads to less than satisfactory outcomes.

2.12 Pedagogical Practices of Teacher Using ICT

The pedagogical practices of teachers using ICT can range from only small enhancements of practices using what are essentially traditional methods, to more fundamental changes in their approach to teaching. For example, some teachers using an interactive white board have displayed content and ideas for class discussions in a traditional way, while other teachers have allowed pupils to use the white board to present dramas to the whole class that they had planned and filmed themselves. Magret C. et al (2003) show that the most effective uses of ICT are those in which the teacher and the software can challenge pupils’ understanding and thinking, either through whole-class discussions using an interactive whiteboard or through individual or paired work on a computer. If the teacher has the skills to organise and stimulate the ICT-based activity, then both whole-class and individual work can be equally effective.

2.13 Effects of Pedagogical Practices on Student's Attainment

There is extensive evidence of ICT contributing to pupils’ attainment. Cox and Abbott, (2004) show that these benefits depend on the way in which the teacher selects and organises ICT resources, and how this use is integrated into other activities in the classroom, at present, the types of ICT resources available mean that ICTs use is nearly always focused on specific aspects of the curriculum. There are two clear areas where teachers have been shown to embed ICT in their teaching, and where this has enhanced learning; this is in English and literacy, through the use of word processing, presentation software and interactive video.

2.14 Effective Pedagogical Practices with ICT

Pedagogical integrated ICT effectively in teaching, learning in the curriculum. These include the need for teachers to:
a. Understand the relationship between a range of ICT resources and the concepts, processes and skills in their subject.

b. Use their subject expertise to select appropriate ICT resources which will help them meet the specific learning objectives; this includes subject-specific software as well as more generic resources.

c. Be aware of the potential of ICT resources both in terms of their contribution to pupils’ presentation skills, and their role in challenging pupils’ thinking and extending their learning in a subject.

d. Develop confidence in using a range of ICT resources, via frequent practice and use beyond one or two familiar applications.

e. Appreciate that some uses of ICT will change the way in which knowledge is represented, and the way the subject is presented to and engages pupils.

f. Know how to prepare and plan lessons where ICT is used in ways which will challenge pupils’ understanding and promote greater thinking and reflection.

g. Recognise which kinds of class organisation will be most effective for particular learning tasks with ICT, for example, when pupils should work on their own, how working in pairs and groups should be organised, and when to use ICT for whole.

The majority of teachers, including the most innovative, require more knowledge of and confidence with ICT, and a better understanding of its potential to help pupils’ learning. This suggests that further substantial support for continuing professional development is necessary in order that teachers integrate the use of ICT and improve pupils’ attainment class teaching.

2.15 ICT in Secondary Education

Two of the fundamental differences between primary and secondary schools are in the allocation of ICT resources and the cross-curricular nature of primary education compared with the subject-specific teaching and organisation in secondary schools. Beauchamp, (2003) state that most secondary schools have a few computers in each classroom, and sometimes an electronic whiteboard, whereas most secondary schools have a greater emphasis on networked computer rooms. In some secondary schools, ICT is taught as a discrete subject within an ICT department; in others ICT is taught across the secondary curriculum through other subjects. 86% of secondary schools found the majority of
computers are located in labs, compared with only 16 percent for classrooms. This difference has implications for teachers’ pedagogies, for example it has been shown to be a key influence on the way primary school teachers have been using ICT (Watson, 1993, Selwyn and Bullon, 2000). In secondary schools, there is more focus on ICT within subjects, but the demands of ICT teachers who are responsible for teaching ICT as a subject can limit other teachers’ access to the technology (Beauchamp, 2003). Further research relating to attainment can be found in the companion literature review to this publication (Cox and Abbott, 2004)

2. 16 Teachers and ICTs

Teachers play a dominant role in integrating ICT based teaching. Baker et al; (2008) state that: "Will not only teach the content knowledge of the subject, but somehow the lesson should be ICT oriented". Teachers will facilitate and monitor students' Progress. Baker et al; (2008) also added that: "Teachers must computer literacy skills, in par with the advancement of ICT innovation in education"

This implies that:

i. Teachers regardless of age should be at no reason trying to equip themselves with the knowledge of ICT.

ii. Teachers should not only focus on the traditional method of teaching, but innovation and changes should also play a part in teaching reading process. This should not happen as education system evolves and so do the teachers and their way of teaching.

2.17 Pre-Service of Initial Teacher Education

The majority of teachers in classrooms today are trained before ICT became a significant development in education. As a result, in-service programmes have been developed to provide the requisite skills and understanding. Alongside this, teacher training institutions have developed programmes designed to provide student and teachers with the necessary competence and confidence to at least begin to use ICT within their practice. Most students entering pre-service or initial teacher training programmes today will have had considerable exposure to ICT in their own education, as well as for recreational and personal use. However, an assumption that they will already have acquired a basic level of ICT knowledge and experience could disadvantage further those who, for whatever reason, have not had the same opportunities to develop their skills (Simpson et al., 1999).
While many trainee teachers may feel comfortable with the hardware and software they have used and observed. This is not to overlook the fact that one objective of pre-service training should be to develop the confidence of student and new teachers to be innovative and creative in their application of ICT to teaching (Sime and Priestley, 2005). There is a risk that teachers without confidence in both their knowledge of ICT and of the associated pedagogies will become bound by the resources available, rather than developing their own materials and approaches. However, there is also a risk that new teachers with very enthusiastic designs for applying ICT to their teaching can be disappointed and restricted by the resources that are actually available to them in schools (Sime and Priestley, 2005).

2.18 Teachers’ ICT Skill and Experience

Not all the teachers were experienced in all the aspects of ICT that might be required in order to meet the teacher training agency requirements for newly qualified teachers, and some teachers even said that they were unfamiliar with basic aspects of ICT. However, they all expressed confidence in using specific ICT resources in their teaching, and believed it to be an important resource for their pupils’ learning. Although they did not use a wide variety of ICT applications, they were regular users of some ICT resources. (Margret (2003)

2.19 Teachers’ Confidence and Competence in Using ICT

There is a need to consider, separately, the contributions that in-service or continuing professional development (CPD) and pre-service education make in preparing confident and competent teachers. This section considers the readiness of new and experienced teachers to embrace the new technologies and to use them more generally. It focuses briefly on the attitudes of teachers to ICT, their needs and the kinds of the training provided as part of the drive to embed ICT in schools. The impact of ICT on developing classroom practice, where teachers have sufficient skills and confidence to begin integrates various technologies into learning and teaching. National in-service programmes have been targeted primarily at experienced practitioners who are coming to terms with new technologies and new ways of working. In contrast, those who are entering pre-service training directly from schools are more likely to be familiar with the new technologies and less likely to be reluctant users of ICT as a teaching resource. As a result, the implications for pre- and in-service training are likely to be some what different.
Margret. C etal. (2003: 90) also mention that:

*Teachers are confident in their chosen uses of ICT. Few teachers are confident in using a wide range of ICT resources, and limited confidence affects the way the lesson is conducted. Many teachers still fear some forms of technology, which prevents them making much use of them in their teaching.*

### 2.20 Selecting Teaching Strategies

Teaching strategies are the means through which teachers enable pupils to learn. Demonstrating, explaining, questioning, group discussions, role play and pupil presentations are all important features of good ICT teaching in addition to setting pupils practical ICT tasks. Steve K. et al. (2003) skills need to learn and develop as you progress through your training and into your teaching posts. The teaching strategies you use can make a large difference to the success or failure of a lesson. Your choice of strategies needs to provide a means of interesting pupils in the topic, engaging them in learning and enabling them to carry out the tasks associated with the topic. Every lesson should make use of a range of teaching strategies to ensure that you cater for the different learning styles of the pupils and their different levels of attainment. It is important to ensure that the strategies chosen enable the children to meet the learning objectives of the lesson. As you progress you will develop a repertoire of teaching approaches and be able to apply them critically and flexibly to each teaching situation. This will come with time and experience. It is worth analysing a variety of teaching styles and strategies that you see in your observations and try them out in your teaching. Consider which approaches are appropriate in different situations. Some will work and some will not, and it is important to experiment and work on developing the most effective for you. It does not have to be a purely trial and error process, however. There are certain guiding principles which you can use to help you gain success in most situations. These concern involving pupils from the outset, explaining ideas in ways they can understand, utilizing their existing knowledge, asking focused questions, listening and responding to their answers, observing and evaluating how they respond to tasks, intervening when they are working ineffectively, providing just enough help for them to succeed, giving helpful feedback on progress, reflecting on activity and reviewing key learning points.

### 2.21 Coordinating ICT across the Curriculum

The role of the ICT coordinator includes monitoring and assessing the development of ICT capability across the curriculum, staff training, and classroom support and system maintenance. Steve. K.et al; (2000) mention that most significantly, coordinators are
expected to work with the senior management of the school and with heads of subject departments to guide and plan the effective use of ICT across the curriculum and to ensure the appropriate exploitation of new technological developments. To fulfil such a role effectively would seem to demand high status within the school; however, most ICT coordinators feel that they lack status. Success often relies primarily on the personal qualities of the ICT coordinator, although clearly this should not be at the expense of managerial structures. Typically, an effective coordinator has an assertive yet approachable interpersonal style. Coordinators also need to understand the subject cultures and teaching styles of other staff. Furthermore, they need to be respected in the staff room for their teaching ability and need to demonstrate a personal teaching approach that provides a good model of how to manage an ICT-based classroom. These characteristics are more important than technical knowledge. Few schools can afford to rely on ICT coordinators being charismatic superteachers, however. Most are likely to be normal competent teachers with the usual strengths and weaknesses of human beings. The most effective schools found in the project had supported their coordinator by setting up managerial structures and procedures to facilitate two-way communication. These were backed up by clear messages from the senior management team that the development of an effective ICT policy was a priority for the school. You may find that your school has set up an ICT committee that includes one teacher from each subject area. The role of the departmental representative is, first, to ensure that explicit references to ICT are included in the departmental schemes of work, and second to monitor and facilitate the performance of the agreed activities. This includes working with their colleagues to ensure that each teacher in their department has sufficient ICT capability to plan, prepare and teach the required sequence of lessons. Where teachers lack confidence in their own technical abilities, the ICT coordinator tries to provide appropriate support. You may be able to assist in providing such support. (Kennewell and Selwood, 1997)

2.22

**Curriculum and Technical Support for Teachers**

The curriculum and technical teacher support requirements may be viewed in terms of supporting users, implementation, and appropriate pedagogy. User problems are probably the most obvious in that much of the resistance from classroom teachers to the use of computers across the curriculum is put down to a lack of knowledge and skills in operating ICT. (Margret 2003)

Paul (2002:44) says:
However, the implementation of computer applications has been hampered by the lack of experience of teachers and the lack of consideration of appropriate educational problems to solve. All of these barriers may be addressed by considering technical and curriculum support for teachers.

### 2.23 Professional Development for Teachers

Teachers need to be adequately prepared to implement a state-of-the-art ICT curriculum. Indeed, introducing any new curriculum calls for careful preparation, management, resourcing, and continuing support. In the case of an ICT curriculum, even more concerns have to be considered. Educational research studies show that programs of professional development for teachers are most effective if directed to the stage of ICT development reached by schools. Margret, C. et al (2003) state that: the implications of these research findings are that teacher development is best conceived as ongoing process, with many professional development activities conduct in schools.

Paul (2002: 37) notes that:

> *The amount of information in the world is growing at an increasing rate. For teachers and students this means that firstly, there is more to know and secondly, it is important to be able to sift through information efficiently. Computer systems provide tools for collecting information, organizing information, processing information and communicating information. Students and teachers now have to learn to use the tools effectively.*

There are diverse skills and technologies to adjust to and new attitudes to form. As with any technology, if ICT tools become prominent in schools then it is likely that assessment methods in schools will need to be reviewed. Currently most assessment is still based around the use of text book technology and based on a factual retention approach to learning. This style of assessment is unsuited to the ICT environment and therefore other more appropriate means of evaluating student learning will need to be devised. For example, if students have been learning the ICT skills concerned with collecting, selecting, processing and presenting information then this needs to be assessed, not whether they can remember the information itself. If a student has been creating music through a synthesizer and computer package then it is not appropriate to assess her playing the trumpet or guitar. Educators are also concerned about the validity of much of the information available on the internet. Because it is relatively easy and inexpensive to distribute information using the internet, anyone can do so without the information being validated by anyone else. This was less the case with printed and audio-visual (e.g. tapes)
information because they were expensive to produce and had to be purchased by the school, teacher or student. It is now more important for students to consider the validity of the source of any information they get from using the internet. They need to consider who may have been responsible for providing the information and why the information has been made available, for example, information provided by a government agency should be treated differently from that provided by a business organization or that provided by a University. ICT gives teachers access to information to support them in trying new strategies, thinking, reflecting on practice, and engaging with new material. Committee of developments in the science of learning (2000): "Teachers need support in making use of new technologies to enhance their personal work before learning to use them in their teaching." Lankshear & Snyder, (2000: 121) much of this support may be accessed more readily using ICT.

2.24 Benefits for Learning with ICTs

Teachers reported that the use of ICT had many benefits for learning. One of them which emerged strongly was that students could control the learning process and see the results of their actions and decisions. According to Anja, B.et al (2006) other specific examples of benefits arising from learning with ICT included:

a. Students can change variables in mathematics and investigate mathematical relationships interactively.

b. Simulations help pupils to distinguish and control variables.

c. Students can change one variable at a time in a simulation.

d. Students can collect data and do an experiment on an interactive whiteboard.

e. Using simulations challenges conceptual understanding.

f. Students can hypothesise and predict outcomes of processes.

g. ICT enables pupils to learn how to explain things to others.

h. The teacher can focus on the more important task of helping pupils in scientific thinking.

i. The use of interactive white boards helps the teacher introduce the theory behind topics.

j. The use of ICT encourages pupils to reflect on their own work.

k. ICT enables pupils to evaluate their own and others’ work.
l. Having to explain an activity to others requires clarification in pupils’ own minds.
m. Students can access more knowledge during school time.
n. Students are more engaged with learning.

A. Benefits for Teachers
a. Teachers gain a positive attitude towards ICT through government interventions and training programmes, which have led to a ‘routine’ use of embedded ICT (ITU, 2004, Ramboll Management, 2005, Higgins, 2005).
b. An overwhelming majority of teachers in Europe (90%) use ICT to prepare their lessons (Empirica, 2006).
c. Teachers use ICT to plan lessons more efficiently and more effectively due to a more collaborative approach and the sharing of curriculum plans with colleagues and managers. (Higgins, 2005, Harrison, 2002).
d. Effective exploitation of information management Systems leads to increased and formalised cooperative planning between teachers, and this has a positive impact on teaching practices (Underwood, 2006). However there is not a positive picture of the use of learning management systems or virtual.
e. Learning environments. They are still under exploited and used predominantly for administrative purposes. (Kessel, 2005, Underwood, 2005, Ramboll Management, 2006).
f. Teachers are considerably increased their confidence in using ICT (RambollManagement, 2006, Underwood, 2005).

2.25 Impact of ICT on Learning and Teaching
Impact of ICT on learning and teaching, sought evidence of its impact on attainment and on intermediate outcomes such as motivation and behavior, in searching the literature on the impact of ICT in schools, these are the themes that generated the greatest number of publications, perhaps reflecting wider, political concerns over raising standards of learning and teaching in schools and, in turn, attainment. Impact of ICT in general, whilst other documents focused on specific technologies and teaching strategies, according to Steven K. et al. (2003) the use of ICT in secondary schools should have a positive impact on students in terms of supporting their learning and providing them with relevant technological literacy. Earlier sections have discussed the potential for supporting the
learning of students, and in particular addressing their individual learning needs. This section will consider the development of student technological literacy. In addition to these secondary impacts there may be secondary impacts on students connected with not only the use of ICT but the way in which it is implemented.

2.26 Impact of ICT on Learning and Attainment

There are few studies that attempt to discern a direct, causal relationship between ICT use and attainment, although many identify improved attainment as one of a number of outcomes of increased ICT use. Unfortunately, it is not always clear how attainment is defined or measured in some of the research reports. In some, ‘attainment’ refers to performance on standardised tests while in others, the definition is broader and impact relates to observed improvements in pupils’ understanding within specific subject areas, that is, domain-specific cognitive development. In discussing the relationship between ICT use and attainment, more weight has been given to those studies that used standardised tests or similar reference points, while those drawing conclusions on the basis of the arguably ‘softer’ evidence of teachers’, parents’ or pupils’ perceptions of improvement in performance have been used to elaborate upon or supplement the findings. Cox et al. (2003) found evidence of positive effects on pupil attainment in almost all national curriculum subjects. This was most marked in the core subjects of English, mathematics and science, where there has been greater investment in the development of subject specific in a positive effect on attainment amongst those pupils who make relatively high use of ICT in their subject learning. Strand of the impact investigation focused specifically on pupil learning and attainment and found positive associations between ICT use and achievement on some key stage (KS) tests, although the strength of the associations observed varied with stage and subject area. Statistically significant positive associations were found between ICT use and higher levels of attainment. Positive associations were also found between ICT use and National Test results in mathematics (KS2) although these did not reach statistical significance, it was also noted that no association between superior performance and low levels of ICT use was observed. Factors such as the expertise of the teaching staff, access to subject-specific resources at each key stage and the quality of the materials were identified as influential. The findings from impact form a significant part of the evidence in many reviews encountered in the course of this analysis.
2.27 Learning Styles and the Impact of ICT

The concepts of ‘learning styles’ and ‘learning preferences’ feature in a small, but growing, on the benefits of ICT in schools. Where they do, the potential of ICT to present learning experiences in a range of formats is seen as one way of meeting the different learning styles of pupils. Theoretically, learning styles are generally considered to have a physiological basis and to be theoretically, learning styles are generally considered to have a physiological basis and to be fairly fixed for the individual – ‘characteristic cognitive, affective and physiological behaviours that serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment’ Keefe, (1979: 4). There is a significant body that investigates and explores the identification and classification of learning styles and how they might influence the learning process (Riding and Rayner, 1998; Kolb, 1984; Coffield et al., 2004). There are also many instruments designed to identify in individual learning styles, including the index of learning styles (Felder and Silverman1988, Felder and Soloman, 1999). Felder and Soloman (1999) note that, while the profile of an individual’s learning style can provide a pointerto the probability of a tendency towards one or another kind of learning experience or instructional style, it should not be used as an assessment of whether or not a learner is suitable or otherwise for a particular subject or discipline. In addition, they argue that labelling learners in this way may be damaging, if not misleading. Adding further complexity, Riding and Rayner (1998) differentiate between learning styles and learning strategies, where the concept of learning strategies refers to the approaches that learners develop in order to deal with different learning tasks, so that they can make effective use of their preferred cognitive style. Overall, however, the forms of motivation as sociated with ICT use were concerned with learning rather than mere task completion and, when using ICT, pupils perceived their classrooms to be very focused on the process of learning. Passey et, al. (2004) concluded that using ICT helped to draw pupils into more positive modes of motivation and could offer a means by which pupils could envisage success. All of the secondary school teachers involved felt that ICT had a positive impact on pupil interest in and attitudes to school work – pupils took greater pride in their work and it was more likely that tasks were completed and on time.

2.28 Impact of ICT Use on Motivation and Engagement

One of the most frequently cited findings is that of increased motivation and improved engagement exhibited by pupils when ICT is used in learning and teaching, both overall
and in relation to specific technologies such as digital video Pittard et al., (2003) Passey et al., 2004; Becta, 2003a). The most significant research study to date on the motivational effect of ICT on pupils (Passey et al., 2004) aimed to identify and, where possible quantify impact and to relate it to aspects such as learning outcomes, behaviour, school attendance, truancy, anti-social behaviour and uses of digital content. This study drew on a range of theoretical stances, problematising the concept of motivation and identifying a number of different dimensions. It defined eight measures that could be used to identify and quantify these – learning goals, academic efficacy, identified regulation, intrinsic motivation, performance approach goal, performance avoidance goal, external regulation and motivation. Each of these is based on, usually implicit; reasons pupils might have for engaging with tasks in the context of school. For the first four, high levels of measurement produce a positive learning profile while for the last four, low levels are desirable.

2.29 Tools of ICT

ICT as a tool or resource to support, teaching and learning, enthusiasts for the use of ICT in education have long claimed that the technology has the potential to change dramatically the nature of teaching and learning in schools, and to change it for the better. Some have drawn parallels between the way in which the industrial revolution transformed the physical power of people at work and the ways in which the ICT revolution was to amplify the power of the human mind (Howe, 1983). The expectation that ICT would revolutionize education through the more efficient teaching of traditional school subjects and the development of pupils’ thinking has yet to be realised (Stevenson, 1997). The availability of technology and the education and training of teachers reach the point at which such claims may be fairly tested for the first time.

**ICT - tools use to:**

a) Extend the learning experience.
b) Extend Learning.
c) Enrich the curriculum.
d) Expand learning horizons.
e) Help with assessment.
f) Improve teaching and learning efficiency.
g) Motivate students to learn in a different way.
2.29.1 Benefits of ICT Tools

Using ICT tools help to offer the opportunities to develop higher order thinking skills. According to (Vol. 10, No. 7; (2014) ICT includes computers, the internet and electronic delivery www.ccsenet.org/ass. Asian social science systems such as radios, televisions and projectors among others, and is widely used in today’ education field (Fu, 2013). Due to that, ICT is seen as a medium that could facilitate the teaching process. Lowther et al. (2013: 93) state: "There are many benefits that can be gained from using ICT tools in the education field. ICT helps to improve teaching and learning quality". There are three important characteristics needed to develop good quality of teaching and learning with ICT:

a) **The first characteris autonomy** implies that students will be in control of their own learning via the use of ICT. This means that they are able to work on their own or with others. Here, teachers will be in duty to empower students in completing their works either with peers or groups.

b) **The second character is capability** it denotes that students can develop the capability to apply and transmit knowledge at the same time employing new technology whenever they have the confidence in learning processes.

c) **The third character is creativity** ICT also assists students in optimizing their creativity. New multimedia devices can be discovered and materials in the styles readily available can also be created. Thus, the use of ICT can help to develop teaching and learning quality through the assimilation of students’ autonomy, capability and creativity. Using ICT tools help to offer the opportunities to develop higher order thinking skills. Kelman (2012:19) mentions: "higher order thinking skills can be enhanced by using technology". It should be noted that the advent of the digital and information age has made the development of critical and creative thinking, and higher-order thinking skills vital to future success. This indicates that the advancement in ICT benefits students as well as the teachers to develop the higher order thinking skills and not merely depend on the lower order thinking skills. Further, Muir also cited in Ali 2012 proposed that technology is a promising tool to engage students in critical and creative thinking. When the students are exposed longer to the ICT environment, it will indirectly help in fostering students’ higher order thinking skills. By this, the attainment of higher levels of cognition can be achieved when students are able to apply technology.
Few research studies include measurements of the planning and preparation which teachers have to conduct in order to use ICT confidently and effectively. Teachers themselves often do not report on the preparatory and supporting work which is part of their pedagogy. While ICT may enable and encourage teachers to play more of a facilitating role in the classroom, the available evidence also shows that the need to plan activities and assess pupils’ learning outcomes means that the overall role of the teacher remains as a leader and subject expert. When pupils are demonstrating their understanding using an electronic white board, or working collaboratively in pairs at a computer, many teachers have reported that they can gain deeper insights into pupils’ understanding than if they were interacting with the class as a whole, for teachers to benefit from the contributions that ICT make to pupils’ learning in secondary schools they need to have detailed knowledge of and expertise in ICT, the range of possible representations of knowledge, and the ways in which use of ICT might change their pedagogies.

2.30 The Computer in Class

Computers are used for various purposes and as part of teaching different subjects in schools. Furthermore, computer science is taught as a separate subject in almost 80% of both, lower and upper secondary schools and in almost 60% of vocational schools. According to the survey of the European commission for information, space innovation & investment in R&D inclusion in 2007, 78% of German classroom teachers had used computers in class within the last 12 months prior to the study. Little variation exists between school types and between urban rural areas. Most teachers use computers for presentation purposes but also let the pupils use them in class. Only small deviations occur with respect to the subject of teaching. Furthermore, the computer is seen as a means for preparing lessons among 89% of the teachers. Most of the teachers using computers in class use them in less than 10% of all lessons. Only 6% state that they use computers in more than half of their lessons. Vocational school teachers use computers much more frequently in class than their general education colleagues EU, 2006.

A. Computer-Assisted Learning

According to David (2005) over the past 50 years, many different terms have been used to describe teaching being done by a computer system. For example, computer-based instruction and computer-assisted instruction used to be common terms. There has been a gradual shift from these terms to the term computer-assisted learning. Among other
things, this reflects the goal of helping students learn. Computer-assisted learning (CAL) places the emphasis on student learning rather than on teaching being done by a computer.

**B. Classroom Computers**

According to Steven (2005) one or more computer(s) may be allocated permanently to a teacher’s classroom. Some schools find it convenient to place work stations in central work areas such as libraries or staff and student common rooms (Eadie, 2000). Often these areas are not bookable by a class and are available to students on a first come basis. The central location may be part of a learning resource centre (e.g. library) where areas are set aside for whole class or one-to-one implementations which require a large number of work stations (Eadie, 2000). Other areas may be set aside for complementary purposes such as for group work, non-computer activities and individual computer work. This arrangement affords the teacher greater flexibility in implementing applications and a support person may be allocated to a centre to manage the computer systems. The mobile options which allow teachers to book one or more computer(s) to take to their classrooms make it easier for applications to be integrated with the normal teaching programme. This means that some person needs to take responsibility for maintaining a booking system and teachers need to take responsibility for setting up and returning computers. This can be onerous and require a greater level of technical expertise. Some schools have sets of portable computers available for loan from a central location, either to individual students or for classes of students. In many cases the ideal is to provide computers permanently (or for an extended period of time) in regular classrooms. In this situation teacher can plan well ahead for computer applications and can take on responsibility for those computers thus sharing the responsibility throughout the school students also become familiar with these computers and can take on some responsibility for them. Teachers are able to try a variety of implementation and strategies and can integrate computer applications naturally with their curriculum activities. The computers are available when and where they are needed. Some research has shown that when compared with computer laboratories the use of computers in classrooms can lead to improved student achievement, increased teacher confidence and a greater range of integration with the curriculum (Mann et al., 1999).

The major disadvantage is that if the computers are not used regularly then they are not available to other teachers and students and are there by a wasted resource. Often teachers want a projector or interactive white board connected to a computer in their classroom for whole-class presentations (Eadie, 2000). While this is often an expensive and unnecessary
requirement it needs to be considered if the teacher is to be encouraged to use ICT to support learning.

C. Managing the Class Room with Several Computers

According to Marilyn Leask and Norbert Pachler (2014) integrating ICT into the classroom can take on various forms. There are a range of situations that demand differing approaches to ICT, in the same way as teaching within a particular subject area requires different teaching strategies depending on what aspects of the subject are being taught. Making a decision to use ICT does not necessarily mean that the whole focus of the lesson will be on a computer, but it does not mean that the computer becomes an integral part of the teaching.

D. Computers Solve Problems

According to Steve, K; (2000) technology is developed to solve problems associated with human need in more productive ways. If there is no problem to solve, the technology is not developed andor not adopted. Applying this principle to educational technology would mean the educators should create and adopt technologies that address educational problems, of which there are many. Further, a technology will not be adopted by educators where there is no perceived need or productivity gain. This is what Lankshear and Snyder (2000) refer to as the ‘workability’ principle. Therefore, when discussing applications of computer technology to education the question must always be asked, “What educational problem(s) needs to be addressed?” This programme question needs to be asked at all levels of decision-making, from the teacher planning a, to a school administrator purchasing hardware and software, to an educational system officer developing policy and strategic plans. What they provide adequately develops the potential of the students and adequately prepares them for a productive life in society.

E. The differences between Home and School Use of Computers

The attitude that pupils have computers at home may be quite different from that used in school. Steve. K et al; (2000) at home pupils see working with computers as fun; it can be one of their play or recreational activities. Computer games are exciting and can be quite challenging in terms of the attributes they require of the player, such as persistence, remembering information, observational skills, hand–eye coordination and keyboard dexterity. Chatting through e-mail is also seen. There is no teacher standing over children telling them that they have misspelt a word or that there are grammatical errors. But, while e-mailing; youngsters will experiment with different techniques such as changing
the layout, adding pictures and sound. They are learning in a relaxed, unintimidating environment on tasks that they see as valuable. In school the situation may be different. The tasks that you ask pupils to do will not have any of the excitement of games software and you will not be able to reproduce the intimacy of writing to a close friend. In school, teachers are governed by the national curriculum, assessment requirements, timetables and deadlines. None of these exists at home. Wellington (2001) points out that learning using ICT at home has the following characteristics:

i. Undirected and unlimited.

ii. Haphazard, unstructured and unsequenced and has many unintended outcomes (sometime difficult to measure);

iii. Available on demand (more or less); learner centred, with the learner clearly in control.

If students are asked to carry out tedious it tasks in school or are provide with computers that donot meet the demands of the job, they are likely to become disaffected with their ICT lessons.

2.31 The Internet

The massive democratization of the internet in the late 1990s also led to a dramatic increase in the number of activities that could be performed when using computers. The internet is the defining technology for literacy and learning, it is also clear classrooms have yet to take internet integration systematically, let alone instruction in the new literacies the internet requires. The rate of this growth has been exponential; most of it has taken place in the past five years (Global Rea n.d.) In the history of literacy, no other technology for reading, writing, and communication has been adopted by so many people, in so many places, in so short a time. While the internet fills important personal needs, much of the increase in internet use has been driven by changes taking place in the Workplace. Friedman, (2005) mentions "economic units have had to increase productivity in a globally competitive economy". As a result, the world of work has recently undergone fundamental restructuring. Bruce (1997) mentions during the past decade, integration of the internet into school settings has also been rapid. In (1994), only 3 percent of all K–12 classrooms in the United States had internet access; today, 93 percent have access.
According to Parsad & Jones, (2005) internet access does not necessarily mean that students are being taught the skills necessary to locate, read, and think critically about online information. Indeed, while is nearly ubiquitous internet access in U.S. classrooms, new technologies such as the internet are not often integrated into instruction. In fact, those pioneering teachers who have led the way with internet integration focus on the technology aspects of use, not seeing the this as an instructional issue for literacy at all Karchmer, (2001).

A. Level of Support for Internet Searches

It was agreed that teachers needed to provide a structure for pupils to focus their research when using the internet, and that they need to consider the following points relating to use of the internet:

i. The purpose for learning objectives for using the internet needs to be considered.

ii. Many sites have too advanced language for young learners.

iii. Sites which have more graphics help interpretation for pupils.

iv. There is only a finite amount of time for pupils to complete the task in a lesson or lessons.

v. Even at A-level, students can meander unproductively when conducting research.

Some of these issues can be overcome by providing pupils with a list of appropriate websites.

According to Jafari, D. et al (2004) the internet also is appearing in school classrooms in the United States and other countries at rate that parallels its appearance in the workplace and at home. In only eight years (1994 to 2002), the percentage of classrooms in the United States possessing at least one computer with internet access has gone from 3% to 92% (National Center for Education Statistics [NCES], 2003a). This is an adoption rate that is unprecedented in schools for any previous technology including televisions, radios, telephones, video cassette recorders, and even books. The availability of internet access has had a demonstrated impact on students. In 2001, 94% of children ages 12-17 who had internet access said that they used the internet for school-related research (Lenhart, Simon, & Graziano, 2001). The quality of internet access in schools has also undergone a rapid transformation. In 1996, three quarters of U.S., public schools with internet connections reported using phone modem access. Heaviside, Riggins, & Farris, (1997), while in (2002), 94% of schools reported having broadband access permitting faster access to
richer, more memory intensive media. The rate at which schools have moved from phone modem access medium, to broadb and access in the United States is even faster than this same migration in homes (cf. Lebo, 2003) thus, it is clear that the internet is rapidly finding its way to a central location in the work place as well as in home and school contexts. The appearance of the internet in the work place as well as in home and school contexts is one of the most powerful social revolutions taking places today. At the heart of this revolution are the new literacy skills and strategies demanded by the internet and other ICTs.

2.32 The IPad

Heralded a new age in technological convergence and promised to bring mobile technologies intovery home technology. While the iPad had the feature of an eBook reader, it also allowed access to the myriad resources of the internet; allowing users to seamlessly switch from one text to another or delve beyond the text itself.

According to Sheppard in (2010) the iPad is new technology to classrooms and the introduction of anything new brings with it considerations for learning and pedagogy. As well, at the time this research project was undertaken, the iPad, only just on the arket, was predicted to be a ‘big iPodtouch’; essentially a gaming/entertainment device. Wanted to explore the implications for this in a classroom, with its instant access to resources, books, magazines and purpose built apps; the iPad was heralded as the affordable alternative to existing educational.

A. Reading with IPads

According to Sheppard (2011) while the iPad had the features of an eBook reader, it also allowed access to themyrriad resources of the internet; allowing usersto seamlessly switch from one text to another or delve beyond the text itself. However, the iPad is new technology to classrooms and the introduction of anything new brings with it considerations for learning and pedagogy. As well, at the time this research project was undertaken, the iPad, only just on the market, was predicted to be a ‘big iPodtouch’; essentially a gaming/entertainment device. We wanted to explore the implications for this in a classroom. Obviously at the time of the study, which took place a few months after the first iPad release, there was no real scholarly communication about the benefits of using the iPad in the classroom. There was ecotatal information and opinion coming from trials across the globe but little of this was around the specific use of the iPad as an eBook reader.
Studies of the eBook reader predominately looked at its use with textbooks and higher education. The past two horizon reports (NewMedia Consortium, 2010 & 2011) have identified electronic books as an emerging technology to watch. The authors of the 2010 report rated them as having an adoption horizon of two to three years out; in 2011, this adoption horizon became one year or less. However, the K–12 edition of the Horizon report has yet to include (as of 2011) electronic books as key to primary and secondary education. Reading electronically impacts on the way an individual comprehends what is read. “Web text reading is different from print text reading because web text has additional features.”

Sutherland Smith, (2002) also has been noted that reading web text for inquiry leads to less thought and evaluation (Eagleton, cited in Corio, 2003). While our project was not using web text, we had chosen to use the eBook format of ePUB. This format provided us with more than print text, as, for example, each word is hyperlinked to an inbuilt dictionary. As well, this format allowed for organised annotations. The RAND reading study (2002) states “electronic texts that incorporate hyperlinks introduce some complications in defining comprehension because they require skills and abilities beyond those required for comprehension of conventional, linear print”.

B. Using an Ipad to Teach Vocabulary

According to Sheppard (2011) secondary school headmaster decided to introduce iPads out of all the new technologies. However, there were two key questions to answer:

i. Is a lesson prepared/taught using an iPad at least as effective as a lesson taught without it?

ii. Will it be time saving for regular teachers?

The first question was at least partly recently answered by a study of a group of Taiwanese university teachers. They divided two classes in two groups having one learning new vocabulary for 18 weeks using iPads, while the other had to learn the same words without it. The results showed that at the end of the semester, students who received the iPad vocabulary teaching instruction performed better on the post-test. Also, the survey found out that students agreed on using technologies in the classroom can help language learning. That is, using iPad Apps in language teaching can not only enhances students’ learning outcomes, but also increases students’ learning motivation.
2.33 The PowerPoint

According to (Vol. 2 Issue 8, August – 2013) ICT tools make the lesson more interesting. For example, through using Power Point slides, the students can pinpoint the words, phrases or structures instead of just reading from texts. Potential benefits of using PowerPoint presentation graphics include the under listed:

a) Engaging multiple learning styles.
b) Increasing visual impact.
c) Improving audience focus.
d) Providing annotations and highlights.
e) Analyzing and synthesizing complexities.
f) Enriching curriculum with interdisciplinary.
g) Increasing spontaneity and interactivity.
h) Increasing wonder Using PowerPoint makes it easy for student to integrate graphics and animations into your slides which can illustrate key points and processes for your students. Preparing a presentation helps the teacher to provide good structure and maintain flow of the subject matter. You can then emphasize key points, focus attention, aid understanding using accurate charts and scaled diagrams that will help the learners to remember and spell more efficiently.

A. Some PowerPoint Features

The following are some PowerPoint features:

Features that can commonly be used by teachers during classroom interaction which will put perfection to the way presentations are made with PowerPoint. Colour combinations should be put into consideration while preparing slide show using PowerPoint. Some text can be clear and easy to read when good colour combinations are used while some classroom that will make the usage of PowerPoint easier and faster.

B. PowerPoint Presentations with Voices

According to Bc. L (2014) sometimes students of English can be asked to prepare a PowerPoint presentation for their classmates or the English teachers create presentations for the students by themselves. It is presupposed that there will be a commentary accompanying the presentation, however, now it is also possible to upload the commentary to the presentation prior to its projection. One of the online tools which
enable this is the BrainShark programme and Motteram describes its functioning and benefits as following: use of BrainShark over the last three years and it has been a really successful tool to work with. Students produce their own PowerPoint slides, load them up onto BrainShark and then add their voice to their slides. BrainShark packs the PowerPoint presentation with the audio and creates a link to a file that can easily be shared with the teacher. So, students can create PowerPoints on a given topic, record and re-record their voice until they are happy with their recording, and then share their work at the click of a button. Students and teachers can listen to the recordings and add notes/comments as feedback.” Students share their presentations with the teacher, who gives feedback and then also with their peers, who comment on the topic, on the language and on the way the topic was presented. They not only practice working with information while creating the presentations, but also working with their voice as they have to speak fluently. Because of the fact that the presentations can be perceived as final products, they can be easily added into the student’s portfolio or e-portfolio and if they are made public they can be used by other students later on as well. Furthermore, BrainShark can be used for uploading commentaries to files, microsotfword or excel files, videos or even to photos in a photo album. As one of the maturita tasks of the secondary school students of English in the Czech Republic is tocoherently describe a picture and compare it with other pictures, BrainShark can be perfectly used for the practice of this speaking activity. Students may be given pictures or photos and they can record their voice describing them. This material may be further analyzed by the teacher or by the peers.

2.34 The Desktop

According to David, (2002) macintosh computer that first became available in 1984, with its graphic user interface, was woefully under powered. However, it had a mouse, and it came with both word processing (allowing multiple type faces and font sizes) and graphics software. With the aid of a relatively inexpensive eraser printer, the user of such a system could do professional-level desktop publishing. Take a look back at the three components used to define a compelling application. Clearly, desktop publishing is a compelling application for many people. Think about what this compelling application did for mechanical drawing, engineering drawing, and graphic arts curricula in the secondary school level. And, think about the spill over into journalism courses (e.g., the school newspaper and yearbook). Indeed, we are now beginning to expect that all students
develop a reasonable level of knowledge and skill in the design and layout work required in desktop to publishing, even in secondary school.

2.35 The Interactive Whiteboards

The use of IWBs interactive whiteboards has been investigated and evaluated more than any other presentational technology. Wall et al., 2005; John and Sutherland, 2005; Ofsted, 2005; BESA, 2005; Beverton et al., 2005, this may be as a result of the general government endorsement of the technology to schools and particular initiatives (the Schools Whiteboard Expansion project, for example) which have provided major funding specifically for the purchase of IWBs. The general conclusion from qualitative research studies is that IWBs rank highly as whole-class teaching tools and there are a number of educational benefits which can result from their use. Higgins et al. (2005) conclude that there was a significant impact on classroom interactions. When IWBs were introduced into primary schools, they were more cautious regarding long-term impact on attainment in literacy. The study, which involved both quantitative and qualitative data gathering and measured impact on attainment in terms of change in key stage test scores, found some improvement in the first year of the two-year classroom practice (or not). Small-scale studies, in term of time scale and data-gathering instruments, provide useful snapshots, but any perceived impact should be examined more closely to determine whether or not it with stands the passage of time.

Higgins et al. (2005) state that:

> Interactive whiteboards can help teachers to improve the quality of their presentations, increase pupil involvement through interaction with the technology and each other, raise pupil motivation, extend communications skills (speaking and listening), make the curriculum more relevant and immediate through presenting concepts in novel ways, facilitate group work and cross-curricular links and increase the efficiency of knowledge transfer.

A. Interactive Whiteboards and Projectors

Classroom practices are a natural fit with interactive whiteboards and projectors, giving these tools the power to enhance teaching because they support instructional practices that research has shown to be successful. Rivers and Sanders (2002) consider these scenarios:

a. Teacher uses a whiteboard or projector for video multimedia to anchor real-world
Contexts in the classroom and provide (or activate) important background knowledge for a science or math lesson.

b. Teacher explicitly models her own construction of a graph on an interactive Whiteboard and demonstrates a step-by-step process, then calls on students to come up to construct graphs.

c. Teacher sets up a dynamic classroom discussion by using a social studies simulation to engage students in making decisions guided by historical events.

d. Teacher uses a projector and a computer with the class to collaboratively produce a graphic organizer about cause and effect themes from a literature selection, effectively conducting an instructional conversation and keeping everyone involved interactive whiteboards offer some specialized utilities that support teaching, such as screen highlighting, spotlighting and printing the screen, but the hardware is inert until a teacher deploys it while teaching.

Many teachers use projectors and whiteboards to show internet teaching resources, such as videos, animations, and websites. Others use software tools, such as concept mapping software and virtual math manipulatives. These resources can be well suited to interactive whiteboards but often require more time and preparation by a teacher. Another way to harness the power of projectors and whiteboards is classroom software– programs designed for specific curriculum areas, designed for the classroom environment, optimized for student participation, and ready to use with modest teacher preparation. In the examples cited above, the teacher relies on classroom software instead of making each lesson herself.

2.36 The Video – Conferencing

Video - conferencing has been slower to become a regular feature of pupils’ experience, in part due to the need to have broadband connectivity and appropriate technology (Condie et al., 2004). Research into the use of video - conferencing in mainstream schooling has been limited – most attention has been focused on uses. In the late 1990s, many of the super highways initiative projects (Scrimshaw, 1997) involved the use of video conferencing and major research lay dormant until the evaluations of the motivate project (Gage et al., 2002) and the DfES Video-conferencing in the classroom project (Comber et al., 2004). The research indicates that a wide range of social and educational benefits can accrue from the use of video-conferencing – benefits in curriculum learning, the
development of social and communication skills and increased cultural awareness. Conclusions from the DfES video - conferencing evaluation were based on an analysis of projects in 28 schools, with varying lengths of video-conferencing experience, and principally from the subject areas of English, geography, history and modern foreign languages (Comber et al., 2004).

Video - conferencing was highly motivating to students, it enabled links and cultural identities to be formed with other cultures, supported a shift to learner autonomy and enabled authentic learning experiences. The evaluation team noted that provision of equipment varied widely, along with stand-alone mobile systems and internet connectivity. The most frequent forms of use were those of conferencing with outside experts and small group working, where video conferencing was used to enhance or add value to existing activities. Teachers’ perceptions were that it had raised attainment, but there was no statistical evidence to support this. Video - conferencing appeared particularly suited to modern foreign languages where synchronous, face-to-face interaction with native speakers helped develop student confidence and competence above the level expected in traditional lessons. A number of examples reflected its value in raising cultural awareness, often as a result of exchanging environmental information, through linking rural and urban communities together or establishing links to major science. The evaluation team identified a number of factors that were associated with its effective use, which together formed a ‘fitness for purpose’ framework (Comber et al., 2004, p.10).

The recommendations included suggestions for action at national level, including support for the dissemination of good practice and a directory of expert guidance and advice, as well as at authority and school level. More pertinently, they identified areas for further research such as longer term investigations of schools where video - conferencing was embedded in practice in order to look more closely at the impact on attainment and to determine the long-term effects of its use. Rural schools have used video-conferencing successfully to share lessons and communicate with other schools and external agencies (HMIE, 2005) and it has been used effectively in a crossborder project aimed at promoting citizenship and tolerance in Northern Ireland and Eire learning (Austin et al., 2003). Exploiting broadband connectivity has also been used effectively to promote multi-cultural education (Thurston, 2004).
Reporting on a study involving pupils in a Scottish school conferencing with a school in the USA, Thurston notes that attitudes to ethnic minorities became more inclusive and pupils developed a better understanding of their community environment and ethnicity issues. Essentially, pupils interviewed individuals from ethnic minority groups living in Britain and subsequently edited the video footage for presentation to the American pupils. This involved consideration of what to leave in or to cut, reflecting on the issues that they wanted to raise and report during the video-conference. While the pupils in this study recorded their own video, the findings also indicated that the judicious use of news footage could be used to develop critical thinking skills and improve perceptions of diversity.

2.37 Factors Affecting ICT

Adoption of ICT in schools could be affected by a number of factors. According to Cox & Marshall, (2007) these factors can be grouped into contextual and psycho-sociological factors. Psycho-sociological factors relate directly to the educators use of technology – this could be psychological or social. Contextual factors refer to aspects of the environment in which the ICT is used. Educators’ knowledge and willingness to adopt ICT is often associated with sociological factors such as age and teaching experience using ICT. Educators’ approach to pedagogy may have an impact on whether the ICTs could be integrated into the teaching and learning process. If an educator believes in and holds on to traditional methods of teaching, he/she may not be likely to change his/her pedagogy to embrace ICT in teaching and learning. Conversely educators with belief systems more inclined to constructivist principles are more likely to view learners as active participants in the learning process and therefore, readily integrate ICT in their teaching and learning practices contextually, different environments bring about different challenges in implementation and utilization of ICT within the pedagogical practice. For instance, in a classroom situation, one such factor is the ratio of learners to computers in the computer laboratory. A high learner-to computer ratio results in less exposure to the computer per learner and may result in one learner dominating the use of a computer while the others simply watch passively. This may lead to inefficient teaching and learning since not all learners may equally benefit from the technology (Pelgrum, 2001). Infrastructure is another contextual factor affecting ICT adoption in schools. The infrastructure required for the use of ICTs in teaching includes physical space, furniture, electricity and internet connectivity (Gulati, 2008). While the availability of such
infrastructure may not be a challenge in developing countries or in schools in affluent areas, their availability (or ease of acquisition) in disadvantaged schools is not guaranteed (Obijiofor, 2009). Without a constant and reliable electricity supply, it is difficult for the regular running of ICT facilities. The institutional management also plays a significant role in the adoption of ICT in schools. In environments where there is a top-down management style with little consultation between levels, staff members feel coerced into using ICT and therefore do not use it effectively (Czerniewicz & Brown, 2009)

2.38 Barriers for Effective ICT Use in schools

Although teachers appear to recognise the value of ICT in education, difficulties nevertheless continue to be experienced within the processes of adopting these technologies. According to Anja, B. et al (2006) the barriers are broadly divided into three categories: teacher-level barriers, i.e. those related to teachers’ attitudes and approach to ICT, school-level barriers, i.e. those related to the institutional context and system-level barriers, i.e. those related to the wider educational framework. (BECTA 2004)

A. Teacher level barriers
i. Lack of ICT skills

The reasons for selecting a technology are affected more by the teacher’s skills than by professional consideration, many teachers still chose not to use ICT and media in teaching situations because of their lack of ICT skills rather than for pedagogical/didactics reason. On the other hand, teachers’ ICT knowledge and skills is not regarded anymore as the main barrier to ICT use. But even though they are regarded as less of a problem, and despite teachers’ ICT training, there is still a lack of follow-up on the utilization of newly acquired skills.

ii. Lack of motivation and confidence

In using ICT their limited ICT knowledge, makes teachers anxious about using ICT in the classroom and thus do not feel confident to embrace new pedagogical practices.

iii. Inappropriate Teacher Training

Unsuitable teacher training programmes fail to engage teachers in using ICT both during their lessons and also in the preparation of lessons beforehand. The most commonly mentioned cause of this is that training courses focus mainly on the development of ICT skills and not on the pedagogical aspects of ICT. It is interesting to observe that although
some teachers have good ICT skills in terms of their own personal use, they are unable to transfer these skills to using ICT in the classroom (Becta, 2004).

B. **School – level Barriers**

C. Even after receiving basic and pedagogical training in ICT, some teachers are still not able to make use of that training since they are hampered by a range of school level factors. These are:

A. **The Absence and Poor Quality of ICT Infrastructure**

The availability of technology is not necessarily a factor for the successful implementation of ICT, yet the absence of technology is a crucial hindrance. The provision of ICT infrastructure does not necessarily mean that use will be higher. On the other hand, some studies show that in schools with more ICT equipment, headmasters consider that ICT has encouraged the integration of new pedagogical methods into teaching.

B. **The Lack of High Quality**

Hardware and suitable educational software is also considered by the majority of ICT coordinators as an important hindrance to further development of ICT in education. Poorly maintained computers are usually unreliable and likely to cause disruption to even the best planned lessons. Similarly, inappropriate software does not enhance a lesson in any way and rather disengages both teachers and students from the learning process.

C. **Limited Access to ICT Equipment**

The inability of teachers and students to access ICT resources is a result of a number of other factors and not only of the lack of ICT infrastructure. Sometimes a school may have high quality of ICT resources but these are inappropriately organized and thus not optimally used. In some schools for instance, prior booking of the ICT classroom is required, or the internal school network cannot be accessed from outside. As a result teachers and students do not have the opportunity to use ICT at any time according to their needs.

d. **Schools’ limited Project-Related Experience**

Many schools have limited experience with systematic planning and implementation of development projects and follow-up.
e. Lack of Experience in Project-Based Learning

The E. learning Nordic study shows that most of the teachers who report the greatest positive impact of ICT were experienced in project-oriented teaching supported by ICT, while half the teachers who report no impact of ICT seldom or never did this. It is also the teachers who experience the greatest impact of ICT who are most often engage their pupils in learning activities in which pupils are asked to work exploratively and innovatively supported by ICT. Yet, these activities are carried out by enthusiasts and lack continuous involvement of the whole school or the whole municipality with a view to anchorage and dissemination of the results.

f. Absence of ICT Main Streaming into Schools’ Strategies

Schools face the problem of unsuccessful organisational implementation of ICT because ICT is not seen as a part of the general strategy at school level. Even if some schools have developed ICT strategies; these are not integrated into the school’s overall strategies. Yet ICT is no longer a goal itself, an isolated phenomenon requiring a special strategy. Instead, it should be used to support whole school development.

C. System-Level Barriers

1. The Rigid Structure of the Traditional Schooling System

Sometimes education systems work against ICT impact and even if educators' are not ICT-resistant, in some cases the system under which they work, for example, in UK, national tests are not made for ICT rich schools. Studies such as the test bed study give some valuable results concerning the factors that impede the effective use of investments in ICT, as it was shown in the study investments in ICT are not able to have an impact they should have in secondary schools within the present education system.

2.39 The Challenges of ICT Tools

The challenges of the usage of ICT tools in secondary schools such as PowerPoint application software can be traced to the following factors: (Vol. 2 Issue 8, August - 2013)

A. Electricity

The major problem of using ICT in secondary schools in teaching reading comprehension is electricity supply which is not stabled. Some areas have not been connected to electricity supply; even most of the schools in cities are faced with shortage of electricity supply.
B. Poor ICT Penetration

This is another factor militating against the full implementation of ICTs in secondary schools. The poor penetrations of using ICT tools like PowerPoint for instance among secondary school teachers has become alarming especially in the rural areas where the facilities are not just there.

C. Basic ICT Infrastructures

There is low access to ICT infrastructures which can provide adequate penetration to ICT tools. By this, massive usage of such ICT facilities to gear teaching and learning towards the modern ways of impacting knowledge in the classrooms is at a secondary level.

D. Poor Economic Situation

The state of the economy of most secondary schools has formed barrier to proper access to ICT facilities.

E. Poor Telecommunication Facilities

All ICT tools depend on telecommunication facilities to function. The internet and intranet can only function when there is a firm telecommunication facility in secondary schools.

2.40 Advantages of Using ICTs

Teachers considered that ICT can make an important contribution to schools, helping the teaching and delivery of the curriculum in a number of ways: (BECTA 2004)

a. ICT helps teachers make the lesson more interesting.

b. ICT helps teachers explain things more clearly to learners. ICT can be used in most curriculum subjects.

c. ICT encourages teachers to vary the ways in which they organise pupils in their lessons, for example, computer partners, pairs, larger groups.

d. Teachers prepare for relevant activities before hand; for example select suitable websites or prepare a folder of images. An important activity for the teacher is to prepare tasks requiring pupils to demonstrate their knowledge.

According to Melor, M. et al. (2013) upon inquiry on whether or not there are advantages in the use of ICT in teaching reading comprehension, most of the teachers referred to the attractive features of ICT tools. Although Fadhil who was a teacher in a
secondary school in Alor Setar did not use ICT in his teaching of reading, he referred to the advantages of using ICT in teaching reading skills. ICT is beneficial in terms of attracting students’ attention. Students will be more interested in the lesson when use ICT. More attentive in class and sometimes even a double-period is not enough. In fact, ICT tools are beneficial because they meet the teacher’s teaching objectives. Highlighted the potential of ICT being a useful tool in the teaching of reading as be refers to ICT as having the resourcefulness to the teachers. This finding is in agreement with Melor, M. Yunus (2007) statement that ICT could be a learning tool in education. Some of the teachers referred to the advantages of using internet for improving students’ reading abilities.

They believed that the students can search more about the reading topics in order to fully comprehend the text, for example, Ida from a secondary school in Tawau described her views on how ICT can facilitate students’ learning process: In terms of reading, ICT can help the students with the vocabulary and the meaning of the words in the texts they read. For example, when they are reading a certain article online or when they are watching a movie with English subtitles, they can look up the meaning of unknown words in online dictionaries. So they can learn many words from the web. This response supports the findings by Yuksel & Tanriverdi (2009) on the effects of watching captioned movie clips on vocabulary development of EFL learners. When the findings of this study are interpreted, it can be argued that watching movie clips helps the participants of the study to develop their vocabulary knowledge, and this would facilitate the reading process.

Huda from Johor Bahru also highlighted the multi-coloured features of PowerPoint software for presenting the reading text. She stated that these features attract the students’ attention to be more attentive while the teacher is teaching reading texts. She added that: ICT tools make the lessons more interesting. In general, ICT allows the teachers to access to a wide range of information in different formats. Computers, softwares, cameras and any range of ICT devices can all make teaching reading skills more effective and more fun for the students. However, the number of activities and resources available to teachers is truly vast, and judgments need to be made about when and more importantly why ICT should be used. Using ICT, students can engage directly with the area of literacy and they can focus more on their learning activities. This had been agreed by most of the interviewed teachers.
Chin from a secondary school in Johor Bahru referred to this ICT devices make the lesson easier for the teachers to teach. For example, they can just show their lesson using the screen which has been provided by the school. The students also benefit from the ICT tools and improve their abilities in learning new materials. However, in contradiction with other teachers’ attitudes, Nabihah from Tawau disagreed with the view of ICT being beneficial in teaching reading skills. She elaborated her point of view when asked whether or not there are advantages in the use of ICT in the teaching of ESL reading. She believed that ICT could be useful in the pre-reading stage where by both teachers and students can make use of ICT to get reading materials. She further pointed out that ICT is not so much useful except for getting reading materials from the web. Without ICT, we have newspapers too. Newspapers can be a useful source of information and a very good reading material. The school, have ordered ‘The Star’ newspaper for each class. However, not all students in the class have the chance to read. And sometimes the papers are lost along the way. This doesn’t help much in changing their attitude towards reading. They mostly read the entertainment and sports sections only. If they read other sections, it will actually help them a lot. It seems that Nabihah preferred non-ICT means in making her students read. However, it could be inferred from her comments that even by using authentic materials like the newspaper, the students’ reading skills could not be much polished too. Moreover, in Hasnah’s feedback, she felt that ICT is not beneficial in terms of teaching reading skills. She stated that “I think it is more beneficial to photocopy worksheets or handouts from the textbooks for reading activities.” From this comment, it can be understood that ICT is not seen as an aid in the teaching of reading skills. She still preferred making hard copies of the worksheets or handouts from the students’ textbooks. ICT offers many advantages in the area of modern foreign languages (MFL) and teachers in schools are experimenting with a range of resources and using word processing, blogging, authoring software, video - conferencing, email, interactive video, multimedia resources, presentations software, spread sheets, interactive whiteboards and databases. Many writing activities on the computer have been found to encourage pupils to use new language skills, supporting them with colour, images, sound and video (CILT, 2005).

2.41 Disadvantages of Using ICTs

According to Melor (2013) in response to the question on whether or not the teachers see any drawbacks of using ICT in teaching reading comprehension, most of the interviewed
teachers highlighted time and place constraint, internet connection problems, lack of ICT knowledge and insufficient ICT tools as the most important factors preventing teachers to use ICT in teaching reading skills. For example, class control is something that many teachers would need to master, especially novices. Therefore, it could be one of the reasons why the teachers did not prefer to use ICT in teaching reading comprehension in EFL classes.

Nabihah from Tawau drew our attention to the problem of class control when she states bringing students to the computer labs; it’s more difficult to control them. Sometimes you might want them to read a certain article online, but they might be distracted to see other websites. When the students have computers in front of them, they tend to visit other websites and not do the tasks you have assigned for them. From the same secondary school in Tawau, Nisa also referred to the problem of students’ distraction. She believed that ICT brings excitement amongst students but that excitement can affect students’ focus of attention inside the classroom. This could further cause destructive noise when the students ‘talk more and do less.

She continued that: using the books and blackboard in English classes, students are already used to that method. When you start to use ICT, students will get very excited. So, they might get distracted especially when you get them to be engaged with ICT. I mean, when they get to use the computers and internet themselves. Another thing is that they tend to focus less when they get too excited about something. Lai from a secondary school in Alor Setar referred to the lack attitude of the students when they have the freedom to access the internet on their own. She expressed her worries about ICT usage when she said: I’m afraid of what the students actually learn from the use of ICT. Sometimes the students search for articles on the net but they might browse other inappropriate sites and they end up not reading the appropriate articles. When you ask them to print out one suitable article to show to you, they might just choose the simplest one they can find without actually selecting it. Moreover, the teachers referred to the poor connectivity of internet and limited ICT facilities in schools. For example, Goh from Johor Bahru and Hamzah from Tawau respectively explained the drawbacks of using ICT in the teaching of reading: The poor connectivity of the internet in schools may pose some problems in doing reading activity that needs the internet. Also, the lack of facilities like the LCD projector and individual laptops make extra problems. The classrooms are not equipped with the ICT tools and I have to bring the students to the computer lab. The capacity of
computer labs is insufficient. So how can I cram 30-35 students in a small room with 15-20 chairs? Some of the students have to sit on the floor. The internet goes on and off, and too slow. Also, there is no technical support. It is reported that from the use of ICT in teaching reading skills, teachers found it more difficult to control the class. Students got too excited when ICT was used and this had caused problems to teachers in terms of class control. Besides that, students might be distracted by other elements in the website when they use the internet besides the distraction factor, teachers were afraid of the actual content from students’ readings on the internet.

2.42 Previous Studies

In this section, studies conducted in the area investigating the role of ICT in teaching reading comprehension in EFL classes.

The First Study: Saeid M. (2011) Study entitled "The Comparison of ICT literacy between teachers and students and presenting a model for Development of ICT in schools".

The Study Findings:

In this section, all research objectives in sample population and results and findings obtained from skill measurement in ICT literacy between teachers, and students are investigated for data analysis by using the indicators of descriptive and deductive statistics.

Recommendations

i. Compile national and global standards for developing ICT literacy in different levels, especially between teachers and students.

ii. The officials of educational organization should evaluate ICT literacy based on global scales and evaluate international ICT literacy of teachers and students.

The second study is: Jafari (2015)

The study entitled "The effective of Integrating ICT resources into reading comprehension in Iranian high school".

The Study Findings:

The data gained through the administration of posttests as well as the questionnaire were closely analyzed. Some complicated relationships were found among teacher-oriented educational and cultural hints, teaching experience, computer learning, age, gender, participants’ collaboration with each other, etc. The data obtained from the questionnaire revealed the following matters about the teacher:
a. There was a negative relationship between age and ICT resources application, i.e., the older teachers were the less they tended to apply computer resources in their teaching curriculum.

b. The more the teachers were knowledgeable in computer programs the more they used them in their instruction, that is, in-service computer training guarantee ICT resources application. Instruction, that is, in-service computer. Highly experienced teachers preferred traditional approaches of teaching and showed fewer tendencies to use ICT resources.

c. The younger teachers were, the more they tended to change and to take risks of trying new processes of language instruction.

d. The older teachers were the more they resisted to any change although they admitted the importance and benefits of integrating ICT resources into language instruction.

e. Female EFL teachers showed more eagerness towards integrating ICT resources into language.

f. Some teachers declared that regardless of their usefulness, the in-service training courses proved to be less useful and applicable by most participants.

g. Most teachers admitted that there is a big gap or controversy between content of the course with final exams.

h. Some participants suggested that if it were possible to offer the final exam in an online way, it would be more practical to provoke a larger number of learners' to accept the new learning curriculum.

i. Results showed that even with adequate access to hardware, software, technical support and computer professional learning, most male participants in the study made limited use of ICT resources in the classroom.

The third Study: Benttayeb Assia (2012)

Benttayeb conducted a M.A study entitled "ICT and Reading: In the Technology – Enhanced Extensive Reading Classroom, university of Chelf.

The Study Findings:

EFL used only in oral and listening sessions and absence of any initiative to use computer or internet technology in the EFL reading/extensive reading classroom.
This fact is due mainly to:

a. Teachers’ fear of losing their principle role presence of a technology.

b. Their discomfort with the idea of using computers or internet for the teaching of reading and unwillingness to shift from the traditional EFL Reading/Extensive reading classroom.

c. Their fear of the bad reaction of students and the miss-use of the technology.

All teachers, including the ones who had no experience with technologies in their EFL shared the same view that the source of constraints in the technology-enhanced classroom is either classes experience with technologies in their EFL classe the students or the technology itself and never the teacher. Teachers’ frustration of the idea that a technology may replaces them is the reason of their hesitation in implementing technologies in their EFL classes.

Recommendations

With emphasis on results of the present study we thought it important to provide both teachers and students with some recommendations for the efficient use of ICT in EFL Reading class room. The teachers should keep in mind that:

a. Treat all the possibilities of introducing the technology in his reading the technology classes.

b. Take into a ccount other teachers experience in teaching readin using technologies.

c. The selection of reading materials from the internet needs careful supervision.

d. Technical problems such as electricity problems, the speed of the internet or connection problems are not rare in the technology classroom, what is important is to know how to deal with such obstacles when not expected.

e. Students are also provided with some suggestions that may be of help for them in the technology enhanced extensive reading classroom. Students should bear in mind that:

i. Learning the EFL cannot be achieved with out at least acquiring the reading skills that able them read with comprehension.

ii. Technologies, especially computers and internet have become vital in education in general and in teaching / learning foreign languages in particular.

iii. Training in the use of any technology is needed.

iv. It is never late to ask the teacher for help when needed.

v. 
The Fourth Study: Ton Mooij (2001)

Ton conducted M. A study entitled "Modelling and Suppotring ICT implementation in secondary schools". University of Nijmegen.

The Study Findings:

The research reported here explored the most important characteristic and phrases in the ICT implementation process and its potential improvement in secondary schools.

The Study Finds that:

The introduction and implementation of ICT in schools for secondary school education seem to be a phased through a coherent step-by-step development. This development is expressed in new forms of increasingly active, independent and often also co-operative learning, in learning that is less time- and location-defined, and in a more productive coherent of or a possible (partial) integrating between subjects.

Recommendations

i. Awareness of the relevance of ICT for the school and subject – related departments.

ii. Incidental and isolated use of ICT by one or more teachers.

iii. ICT co-ordination and hardware facilities in the entire school.


Penni (2003) conducted PhD study, entitled "ICT implementation: What makes the difference?"

The Study Findings

The data analysis led to the data being presented under three headings:

i. External influences.

ii. Characteristics of the whole school, its staff and internal processes.

iii. The ICT implementation process key events and characteristics.

These headings emerged from the analysis, taking into account the relative prominence of different issues and their inter-relationships of different issues and their inter-relationships. This matter featured so strongly, that it emerged from the data analysis as a category, in its own right. It could however be argued that it was simply a strong characteristic of the school, and this is how it is presented in the final model of ICT implementation.

The sixth study Julie Coiro (2007) Julie (2007) conducted a PhD study entitled "Exploring Chandes to Reading Comprehension on the Internet". University of
Connecticut, **a first paradox** emerging from this study is that a lower-performing offline reader can also be a higher-performing online reader. This unique finding should help us to see that new and somewhat different skills and strategies may be required during online reading. As a result, we should not assume that readers who struggle with offline reading tasks would automatically struggle with online reading tasks. **A second paradox** is while topic-specific prior knowledge usually plays a significant role in most offline reading tasks, it appeared to play a relatively minor role in a series of three online reading tasks. In other words, several readers with lower levels of topic-specific prior knowledge were not deterred from skillfully applying a range of effective online reading comprehension strategies. **A third paradox** emerging from this study is that offline reading strategies and online reading strategies may be both the same and different. A final paradox emerging from this study suggests that some students who are not motivated to read offline texts are especially motivated to read online texts. All three of the focal students reflected these sentiments in their interviews.

**The Seventh Study**

Gwendolyn J. Melhado (2010)

Gwendolyn (2010) conducted a Ph.D study entitled "Improving Reading Comprehension through the Use of Computer-Aided Instruction among Third Graders". Nova Southeastern University

**The Study Findings**

The findings of this study were to be used as lessons learned from third graders to determine whether CAI should be incorporated in the school’s literacy program. As a result of the impact of this study on struggling readers, it becomes necessary and potentially beneficial to consider CAI as an instructional alternative to be used appropriately to address students’ reading needs. The teachers need to improve their own computer technology skills and consider ways of integrating CAI into their daily learning activities. The results of the classroom observations that were reached by the participating teachers revealed their acknowledgment of the effectiveness of the environment, the resources, procedures, and management where the CAI sessions occurred. This point to areas of improvement for the teachers in their own practice, there are potent lessons for the transference of the routines and practices to the regular classroom environment and pedagogy. The approach used to teach the experimental group was more constructivist than behavioral as indicated by the teachers in their survey. Implied by the findings is the
fact that the support mechanisms will require increased attention and strengthening for CAI to work effectively.

**Recommendations**

i. Teachers should provide or longer intervention periods when using a computer as a learning tool.

ii. Budget developers in the subject school needs to focus on the computer and a academic learning tool.

iii. Teachers may need to adopt more holistic approaches that require students to perform extensive practice in reading.

iv. Teachers need to improve their own computer technology skills and consider ways of integrating CAL in to their learning activities.
CHAPTER THREE
METHODOLOGY

3.0 Introduction

Technology offers a powerful support for learning reading comprehension through inquiry and problem solving. Technology also furnishes information and tools to support investigation and to present data in ways that support critical thinking and problem-solving.

This chapter provides a description of the population and sample of the study, how data were collected and how they were organized. The study outlined the statistical data analysis. This chapter also provides procedures used for a detailed description of the administrators, teachers and students (the samples) to whom the questionnaires were distributed.

3.1 Population of the Study

The population of this study was composed of, male and female teachers who are teaching English and students who are studying English in Al-Hasahisa locality. A sample had been randomly chosen from the first, second and third levels, during year (2015) in the secondary schools.

3.2 Sample of the Study

Selected sample consisted of (40) administrators and teachers. All of them their ages range from 40 - 60 years. Their experiences range from 2 - 40 years. Also all of them specialized in English and teach or used to teach English language in Al-Hasahisa secondary schools. While (60) are students. 20 are girls while 40 are boys. They are selected randomly from different levels. The distribution of the students sample is shown in table No.( 3.1)

Table (3.1): Distribution of students at schools

<table>
<thead>
<tr>
<th>Name of schools</th>
<th>Alrahma School</th>
<th>Ibnkaldoon school</th>
<th>Eltbary school</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Students</td>
<td>20 students</td>
<td>20 students</td>
<td>20 students</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>60 students</td>
</tr>
</tbody>
</table>

3.3 Tools of the Study
For data analysis the researcher used statistical package for the social sciences program (SPSS) to show the result of the three questionnaires items of the study by using percentages and tables. The three questionnaires are: the first for the administrators, the second for teachers and the third for students. The administrators and teachers’s questionnaire consist of (22) statements that seeking information about investigating the role of ICTs in teaching reading comprehension in EFL classes in secondary schools and students’ questionnaire consist of (15) statements. For this study, the statements contained questions concerning the problems that face teachers and students in implementing ICT devices in teaching reading comprehension in EFL classes in secondary schools. The format used in the question construction is scale format.

3.4 The Procedure

The researcher took the copies of the questionnaire with proposal of the study and discussed it with some of the schools staff. They all made valuable comments and suggestions. Those notes and recommendations were carefully studied in the final version of the questionnaire. The questionnaires have been distributed during the first semester of the academic year 2014-2015. The questionnaire was explained to the respondents. The researcher filled up the questionnaire based on the answers of the participants. Hundred copies were distributed: (60) for students at three different secondary schools, (10) of copies were sent to administrators and (30) to teachers in different secondary schools. The study used statistical package for social to analyze the data which were collected.

3.5 Validity and Reliability

The questionnaire was first submitted to five (5) of referees in secondary schools. Then it was examined by the main supervisor who made some comments on the content. After making the final amendment to the questionnaire, it was accepted by the supervisors. Poilt and Hunger (1999:317) define reliability as: "The degree of consistency with which an instrument measures the attribute it is designed to measure". Berg (1989:83) explains that: "The use of a consistent and systematic line of questions for even unanticipated areas is particularly important for reliability and for possible replication of a study". The study used statistical package for social to analyze the data which are collected. The researcher used person’s correlation and the results are below:
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>0.68</td>
</tr>
<tr>
<td>Validity</td>
<td>0.81</td>
</tr>
<tr>
<td>Reliability</td>
<td>Val</td>
</tr>
<tr>
<td></td>
<td>$\sqrt{0.81}$</td>
</tr>
<tr>
<td></td>
<td>$\sqrt{0.95}$</td>
</tr>
</tbody>
</table>

3.6 **Summary and Conclusion**

In conclusion it might be as well to request the main points that are included in this chapter. The chapter focuses on the research design and methodology used to accomplish the study. It has given a detailed description of the population of this study, a description of samples of this study, a description of tools of this study and it shows how the data of this study was collected and analyzed. An analysis and implementation of empirical data collected through these methods will be presented in the next chapter.
CHAPTER FOUR
RESAULTS AND DISSCUSSION

4.0 Introduction

This chapter discusses the methodology used for the statistical analysis of the data obtained from the three questionnaires directed to the research study sample. It also discusses the results and findings which follow the data collection. This chapter is divided into five sections; the first, second and third sections cover the administrators', teachers' and students' questionnaire's results, the fourth section indicates the test results, the final part section covers the results of the data analysis and the tests results are used to confirm or reject the hypotheses of the study and answer its questions. The analysis of the obtained data showed significant results. The descriptive features of the polled were follows:

1. 10 administrators.
2. 30 teachers from different secondary schools
3. 60 students from different secondary schools.

4.1 Data Analysis and Discussion

The data was collected by the researcher and then was statistically analyzed and presented in three categories of tables as shown bellow:

1- Tables with the letter (a) represent administrators.
2- Tables with the letter (b) represent teachers.
3- Tables with the letter (c) represent the students.

The analyses data of the three participants was labeled in frequencies and percentages.

4.2 Analysis of Administrators' Questionnaire

The first questionnaire is directed towards administrators to specify their attitudes towards teaching reading comprehension via using ICT devices in secondary schools.

Statement No. (1) “Technical staffs and ICT devices are not enough in secondary schools”.

Table No (4.1.a) Technical Staffs and ICT Devices are not Enough.
<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>10</td>
<td>37.0</td>
<td>10</td>
<td>37.0</td>
<td>4</td>
</tr>
</tbody>
</table>

Seen from the table No. (4.1.a) above (74%) of administrators agree with the statement, technical staffs and ICT devices are not enough in secondary schools.

**Statement No. (2) “Transferring teachers has a negative impact in teaching English”**.

Table No. (4.2.a) Transferring teachers has a negative impact in teaching English.

<table>
<thead>
<tr>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>11</td>
<td>40.7</td>
<td>5</td>
<td>18.5</td>
</tr>
</tbody>
</table>

Table No. (4.2.a) above shows (77.7%) of administrators agree with the statement, transferring teachers has a negative impact in teaching English.

**Statement No. (3) “Lack of institutional support in secondary schools impedes teaching with ICT devices”**.

Table No. (4.3.a) Non availability of institutional support.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>13</td>
<td>48.1</td>
<td>6</td>
<td>22.2</td>
</tr>
</tbody>
</table>

Table No. (4.3.a) above illustrates that (70.3%) of administrators agree with the statement, lack of institutional support in secondary schools impedes teaching with ICT devices.

**Statement No. (4) “There should be continuous technical training for teachers.”**

Table No. (4.4.a) Continuous Technical Training for Teachers.
As seen in table No. (4.4.a) above (66.6%) of administrators agree with the statement, there should be continuous technical training for teachers.

**Statement No. (5)“The problems of the large number of students in classes impede teaching with ICTs devices.”**

Table No. (4.5.a) The Larg Number of Students in Classes.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>10</td>
<td>37</td>
<td>8</td>
<td>29.6</td>
<td>4</td>
</tr>
</tbody>
</table>

Table No. (4.5.a) above concludes that (66.6%) of administrators agree with the statement problems of the large number of students in classes impede teaching with ICT devices.

**Statement No. (6)“Using ICT devices should be mandatory if it is possible for teachers and students in the future”**.

Table No (4.6.a) Using ICT Devices should be Mandatory.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>11</td>
<td>40.7</td>
<td>10</td>
<td>37.0</td>
</tr>
<tr>
<td>3</td>
<td>11.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to table No. (4.6.a) above (77.7%) of administrators agree that ICT devices should be mandatory if it is possible for teachers and students in the future.

**Statement No. (7) “Connecting classrooms on line while teaching reading comprehension in EFL classes”**.

Table No (4.7.a) Connecting Classrooms on Line.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>4</td>
<td>14.8</td>
<td>10</td>
<td>37.0</td>
<td>7</td>
</tr>
</tbody>
</table>

Table No (4.7.a) above shows (51.8%) of administrators agree with the statement, connecting classrooms in secondary schools on line while teaching reading comprehension in EFL classes.
Statement No. (8) “Ministry of education should help teachers and students to use ICT devices in teaching and learning English”.

Table No. (4.8.a) Ministry of Education Should Help Teachers and Students to Use ICT Devices.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>17</td>
<td>63.0</td>
<td>8</td>
</tr>
</tbody>
</table>

According to table No. (4.8.a) above (92.6%) of administrators agree that, ministry of education should help teachers and students to use ICT devices in teaching and learning English.

Statement No. (9) “Lack of school budget impedes teaching with ICT devices”.

Table No (4.9.a) School Budget Impedes Teaching with ICT Device.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>9</td>
<td>33.3</td>
<td>14</td>
<td>51.9</td>
</tr>
</tbody>
</table>

Seen from the table No. (4.9.a) above (85.2%) of administrators agree with the statement, lack of school budget impedes teaching with ICT devices.

Statement No (10) “Irregularity of electricity current impedes teaching with ICT devices”.

Table (4.10.a) Irregularity of electricity current impedes teaching with ICT devices.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>9</td>
<td>33.3</td>
<td>11</td>
<td>40.7</td>
<td>3</td>
</tr>
</tbody>
</table>

From the table No. (4.10.a) above (74%) of administrators agree that, irregularity of electricity current impedes teaching with ICT devices.

4.3 Analysis of Teachers' Questionnaire

The second questionnaire is directed towards teachers to specify their attitudes towards teaching via using ICT devices in secondary schools.

Statement No. (1) “The availability of computer Labsis useful”.
Table No. (4.1.b) The Availability of Computer Labs is Useful.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>11</td>
<td>42.3</td>
<td>11</td>
<td>42.3</td>
</tr>
</tbody>
</table>

Seen from the No table (4.1.b) above (84.6%) of teachers agree with the statement, the availability of computer labs is very useful.

Statement No (2) “ICT devices implementation in secondary schools is not done properly”.

Table No. (4.2.b) ICT Devices Implementation is not done Properly.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>7</td>
<td>26.9</td>
<td>9</td>
<td>34.6</td>
<td>5</td>
</tr>
</tbody>
</table>

From the table No. (4.2.b) above it is clear that (61.5 %) of teachers agree with the statement, ICT devices implementation in secondary schools is not done properly.

Statement No. (3) “Lack of knowledge and experience of teachers in using ICT devices impedes in EFL classes”.

Table (4.3.b) Lack of Knowledge and Experience in Using ICTs Devices.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>6</td>
<td>23.1</td>
<td>11</td>
<td>42.3</td>
</tr>
</tbody>
</table>

Seen from the table No. (4.3.b) above (65.4%) of teachers agree with the statement, lack of knowledge and experience of teachers in using ICT devices impedes teaching reading comprehension in EFL classes.

Statement No.(4) “High cost of ICT devices is a big problem”.

Table No (4.4.b) High Cost of ICT Devices is a Big Problem.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>8</td>
<td>30.8</td>
<td>11</td>
<td>42.3</td>
<td>2</td>
</tr>
</tbody>
</table>
Table No (4.4.b) above reflects (73.1%) of teachers agree with the statement, high cost of ICT devices is a big problem.

**Statement No. (5) “Insufficient and ineffective training for teachers schools to use ICT devices is not enough”**

Table No (4.5.b) Insufficient and Ineffective Training for Teachers to Use ICT Devices.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>7</td>
<td>26.9</td>
<td>10</td>
<td>38.5</td>
</tr>
</tbody>
</table>

The result from the table above no (4.5.b) shows (65.4%) of teachers agree with the statement insufficient and ineffective training for teachers is not enough.

**Statement No. (6) “Chat, audio and video-conferencing are not available in EFL classes”**

Table No. (4.6.b) Chat, Audio and Video-Conferencing are not Available.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>6</td>
<td>23.1</td>
<td>11</td>
<td>42.3</td>
<td>4</td>
</tr>
</tbody>
</table>

From the table no (4.6.b) above (65.4%) of teachers agree that chat, audio and video-conferencing are not available in secondary schools.

**Statement No. (7)“Computers and internet are available ICT devices in Sudan compared with other devices.”**

Table No. (4.7.b) Computers and Internet are Available in Sudan Compared with other Devices.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>8</td>
<td>30.8</td>
<td>9</td>
<td>34.6</td>
<td>2</td>
</tr>
</tbody>
</table>

Table No. (4.7.b) above shows (65.4%) of teachers agree that computers and internet are available ICT devices in Sudan compared with other devices.

**Statement No. (8) The time allocated to teach reading comprehension in EFL classes is not enough”**
Table No. (4.8.b) “The Time Allocated in is not enough.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>12</td>
<td>46.2</td>
<td>4</td>
<td>15.4</td>
<td>5</td>
</tr>
</tbody>
</table>

According to table No. (4.8.b) above (61.6%) of teachers agree with the statement, the time allocated to teach reading comprehension in EFL classes is not enough.

**Statement No.(9) “Electronic mails for teachers and students should be used for communication”**.

Table No (4.9.b) Teachers Communication Through Using Electronic Mails.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>8</td>
<td>30.8</td>
<td>6</td>
<td>23.1</td>
<td>3</td>
</tr>
</tbody>
</table>

Table No. (4.9.b) above shows (53.9%) of teachers agree with the statement, electronic mail for teachers and students should be used for communication.

**Statement No.(10)“ Irregularity of electricity current empeds using ICT devices.**

Table No (4.10.b) Irregularity of Electricity Current.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>5</td>
<td>19.2</td>
<td>9</td>
<td>34.6</td>
</tr>
</tbody>
</table>

According to table No. (4.10.b) above (53.8%) of teachers agree with the statement, irregularity of electricity current empeds using ICT devices in secondary schools.

**Statement No.(11) “Lack of school budget is abig problem”**.

Table No. (4.11. b) School Budget is Abig Problem.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>13</td>
<td>50.0</td>
<td>6</td>
<td>23.1</td>
</tr>
</tbody>
</table>

Table No. (4.11.b) above shows (73.1%) of teachers agree with the statement, lack of school budget is abig problem.
Statement No. (12) “Teachers should use ICT devices to improve students’ performance in English”.

Table No. (4.12.b) Teachers use ICT devices to improve students' performance in English.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>14</td>
<td>53.8</td>
<td>9</td>
<td>34.6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>3.8</td>
<td>1</td>
</tr>
</tbody>
</table>

As we seen from table No. (4.12.b) above (88.4%) of teachers agree with the statement, teachers should use ICT devices to improve students’ performance in English.

4.4 Analysis of Students' Questionnaire

The third questionnaire is directed towards students to specify their attitudes towards learning reading comprehension via using ICT devices in secondary schools.

Statement No. (1) “Classrooms are not equipped with ICT devices in secondary schools.”

Table No (4.1.C) Classrooms are not Equipped with ICT Devices.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>11</td>
<td>20.0</td>
<td>6</td>
<td>10.9</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24</td>
</tr>
</tbody>
</table>

According to table No. (4.1.C) above (55.6%) of students agree with the statement classrooms are not equipped with ICT devices in secondary schools.

Statement No. (2) “Lack of computer labs in classrooms impedes with ICT devices in secondary schools.”

Table (4.2.C) Computer Labs are not available in Classrooms.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>13</td>
<td>23.6</td>
<td>12</td>
<td>21.8</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7</td>
<td>12.7</td>
<td>18</td>
</tr>
</tbody>
</table>

Seen from table no (4.2.C) above (45.4%) of students agree that, lack of computers in classrooms impedes teaching reading comprehension with ICT devices.

Statement No. (3) “Teaching with ICT devices brings enormous benefits to students.”

Table No (4.3.C) Teaching with ICT Devices Bring Enormous Benefits.
From table No. (4.3.C) above (85.5%) of students agree with the statement, teaching with ICT devices will bring enormous benefits for students.

Statement No.(4)“The miss - use of ICT devices is a problem in secondary schools.”

Table No. (4.4.C) The miss - Use of ICT Devices.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>26</td>
<td>47.3</td>
<td>21</td>
<td>38.2</td>
</tr>
</tbody>
</table>

The results from table No. (4.4.C) above concludes that (41.8%) of students agree with the statement, the miss-use of ICT devices is a problem.

Statement No. (5)“Lack of students' interest in using ICT devices schools is a big problem.”

Table No. (4.5.C) Students' Interest in Using ICT devices.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>5</td>
<td>9.1</td>
<td>18</td>
<td>32.7</td>
<td>12</td>
</tr>
</tbody>
</table>

From table No. (4.5.C) above it is clear that (65.5%) of students agree with the statement, lack of student's interest in using ICT devices in secondary schools is a big problem.

Statement No. (6)“The use of ICT devices improves students' learning and performance.”

Table No. (4.6.C) Using ICT Devices to Improve Student's Learning and Performance

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>36</td>
<td>65.5</td>
<td>7</td>
<td>12.7</td>
<td>5</td>
</tr>
</tbody>
</table>

Seen from the table No. (4.6.C) above (78.2%) of students agree that, the use of ICT devices improves students' learning and performance.
Statement No. (7) “The use of ICT devices makes teaching reading comprehension in EFL classes more interesting than other skills.”

Table No. (4.7.C) Using ICT Devices Makes Teaching Reading Comprehension more interesting than other Skills.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>25</td>
<td>45.5</td>
<td>14</td>
<td>25.5</td>
<td>6</td>
</tr>
</tbody>
</table>

Seen from table No. (4.7.C) above (71%) of students agree with the statement, the use of ICT devices makes teaching reading comprehension in EFL classes more interesting than other skills.


<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>16</td>
<td>29.1</td>
<td>23</td>
<td>41.8</td>
<td>6</td>
</tr>
</tbody>
</table>

With reference to table No. (4.8.c) above (70.9%) of students agree with statement, the use of ICT devices facilitates learning material in secondary schools.

Statement No. (9) “The Setting up of computer labs facilitates using ICT devices.”

Table No. (4.9.C) Setting up of Computer Labs Facilitates Using ICT Devices.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>33</td>
<td>60.0</td>
<td>14</td>
<td>25.5</td>
<td>2</td>
</tr>
</tbody>
</table>

Seen from the table No. (4.9.C) above (85.5%) of students agree with the statement, the setting up of computer labs in secondary schools facilitates using ICT devices.

Statement No. (10) “ICT devices will solve all students' problems in learning English in the future.”

Table No. (4.10.C) ICT Devices will Solve all Students' Problems in Learning English in the Future.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>23</td>
<td>41.8</td>
<td>19</td>
<td>34.5</td>
<td>8</td>
</tr>
</tbody>
</table>
Table No. (4.10.C) above illustrates that (76.3%) of students agree with the statement, ICT devices will solve all students' problems in learning English in the future.

**Statement No. (11) “Slides and over head projector help in understanding reading comprehension in EFL classes.”**

Table no (4.11.C) Slides and over Head projector help in Understanding in EFL Classes.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>24</td>
<td>43.6</td>
<td>20</td>
<td>36.4</td>
</tr>
</tbody>
</table>

Table no (4.11.C) above shows (80%) of students agree, that slides and over head projector help in understanding and teaching reading comprehension in EFL classes in secondary schools.

**Statement No. (12) “The use of flash card helps in learning reading comprehension in EFL classes”.**

Table No (4.12.C) Using Flashcard Helps in Learning in EFL Classes.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>25</td>
<td>45.5</td>
<td>22</td>
<td>40.0</td>
<td>3</td>
</tr>
</tbody>
</table>

Table No. (4.12.C) above shows (85.5%) of students agree that, using flashcard helps in learning reading comprehension in EFL classes.

**Statement No. (13) “Students prefer to use computer and internet device in EFL classes.”**

Table No. (4.13.C) Students Prefer to Use Computer and Internet Devices in EFL Classes.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>23</td>
<td>41.8</td>
<td>18</td>
<td>32.7</td>
<td>3</td>
</tr>
</tbody>
</table>

Table No. (4.13.C) above indicates that (74.5%) of students agree with the statement, students prefer to use computer and internet in EFL classes.

**Statement No. (14) “The use of CD-room is very useful in teaching reading comprehension in EFL classes”.**

Table No. (4.14.C) Using CD-room is Very Useful in EFL Classes.
According to table No. (4.14.C) above (80%) of students agree with the statement, the use of CD-room is very useful in teaching reading comprehension in EFL classes.

Statement No. (15) “Using ICT devices in teaching reading comprehension in EFL classes motivate students to -be creative”.

Table No. (4.15.C) Using ICT Devices Motivate Students to -be Creative.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
</tr>
<tr>
<td>25</td>
<td>45.5</td>
<td>19</td>
<td>34.5</td>
<td>8</td>
</tr>
</tbody>
</table>

Seen from table No. (4.15.C) above (89.1 %) of students agree with the statement the use of ICT devices in teaching reading comprehension in EFL classes motivate students to -be creative.

4.5 Testing Hypothese

In order to illustrate the results of the questionnaires and then to give a clear judgment, the researcher will test the hypotheses of the study to discuss the results in relation to the hypotheses as follows:

4.5.1 Hypothesis One

“Teachers should know what kinds of ICT devices students prefer to use to teach reading comprehension in EFL classes”.

As we can see from table No. (4.13.C) this hypothesis is supported because (75.5 %) of of students agree with the statement, students prefer to use computer and internet in EFL classes.

4.5.2 Hypothesis Two

“The problems of the large number of students in classes impede teaching reading comprehension with ICT in EFL classes”. As shown in table no. (4.5.a) this hypothesis is proofed because (76%) of  dministratorsagree with the statement the problems of the large number of students in classes  impede teaching  reading comprehension with ICT devices in EFL classes.
4.5.3 Hypothesis Three
“Computers and internet are available ICT devices to teach reading comprehension in Sudan compared with other ICTs devices”. This hypothesis is supported with reference to table No. (4.13.C) because (65%) of teachers agree that computers and internet are available in Sudan compared with other ICT devices.

4.5.4 Hypothesis Four
“Technical staff and ICT devices is not enough secondary teach reading comprehension in EFL classes”. As shown from table No. (4.1.a) this hypothesis is supported because (74%) of administrators agree with the statement technical staffs and ICT devices are not enough to teach reading comprehension in EFL classes.

4.5.5 Hypothesis Five
“The use of ICT devices makes teaching reading comprehension in EFL classes more interesting than other skills”. As shown from table no. (4.7.c) this hypothesis is supported because (91%) of students agree that use of ICT devices makes teaching reading comprehension in EFL classes more interesting than other skills.

4.5.6 Hypothesis Six
“Ministry of education should help teachers and students by increasing number of ICT devices”. As we see in table no. (4.8.a) this hypothesis is supported because (92.6%) of administrators agree that, ministry of education should help teachers and students by increasing ICT devices in secondary schools.

4.5.7 Hypothesis Seven
“Lack of school budget is a big problem in secondary schools”. According to table no. (4.9.a) this hypothesis is supported because (84%) of administrators agree, also in table No. (4.11.b) this hypothesis is supported because (73.1%) of teachers agree with the statement lack of school budget is a big problem in secondary schools.

4.5.8 Hypothesis Eight
“Slides, over head projector, CD-Room and flashcard are very useful in teaching reading comprehension in EFL classes”. As we seen in table No. (4.14.c) this hypothesis is supported because (79%) of students agree that slides, over head projector, CD-room and using flashcard are very useful in teaching reading comprehension in EFL classes.
4.5.9 Hypothesis Nine

“Irregularity of electricity current impedes teaching with ICT devices”. From table No. (4.10.a) this hypothesis is supported because (74%) administrators agree also in table No. (4.10.b) teachers agree that Irregularity of electricity current impedes teaching with ICT devices.

4.5.10 Hypothesis Ten

“The time allocated to teach reading comprehension in EFL classes is not enough”. Table No. (4.8.b) shows this hypothesis is supported because (62.4%) of teachers agree the time allocated to teach reading comprehension in EFL classes with ICT device is not enough.

The above number and percentage verified the Hypotheses and shows that ICT problems should be solved for both teachers and students to teach reading comprehension in EFL classes in secondary schools.
CHAPTER FIVE
CONCLUSION, FINDINGS
AND RECOMMENDITIONS

5.0 Conclusion
Teaching and Learning via the use of information and communication technology (ICT) holds particular promise for EFL students in Al-Hasahisa locality. This chapter presents the results and the findings of the study have come up with in terms of the extent to which it has confirmed the hypotheses and the answers of the questions of the study. In addition, it provides recommendations, conclusion and suggestions for further studies. As an overall conclusion we may say that the ICT impact in secondary education shouldn’t be limited to the innovation of didactical measures, but should lead to the internal development of educational institutions as learning organizations. Its main self-transformation will be the accommodation of students’ learning in web-based communities; both inside and outside traditional schooling institutes. ICTs in secondary education are not an isolated phenomenon; they are pushed forward by the evolving technology. Understanding the student’s needs and coaching the student to become a real learner are the typical gifts that many have developed in earlier pedagogical practice. So, teachers should dive in the web and taste the flavour of accessing many experts and then encourage students to these sources as well. Finally, this study explains using of ICT devices to teach reading comprehension in EFL classes. Teachers and students showed positive attitudes towards ICT and are all aware of the numerous benefits of these technologies especially computer and internet. For students the presence of a technology in the classroom will make reading comprehension more enjoyable and help them to practice this skill better than they do in the technology–free classroom where they don’t have such an opportunity.

5.1 Findings of the Study
The study has come up with the following findings:

1. Most of the participants of teachers in table No. (4.8.b) (62.6%) believe that the time allocated to teach reading comprehension in EFL classes with ICT devices is not enough.

2. Most of the participants in table No. (9.4.a) (84%) administrators agree with the idea lack of school budget is a big problem.
3. The majority of the participants administrators in table No. (4.10.a) and teachers in table No. (4.11.b) agree with the idea irregularity of electricity current impedes teaching with ICT devices.

4. Seventy-Six (76%) of the participant administrators in table No. (4.4.a) agree with the idea that the large number of students in classes impede teaching reading comprehension with ICT devices.

5. Ninety-Two (92.6%) of administrators in table No. (4.8.a) agree with the idea ministry of education should help teachers and students by increasing number of ICT devices.

6. Sixty-Five (65.4%) of teachers in table No. (4.7.b) agree with the idea computers and internet are available ICT devices in teaching reading comprehension in Sudan compared with other devices.

7. Seventy-Four (74%) of administrators and teachers agree with the idea technical staffs and ICT devices are not enough in secondary schools to teach reading comprehension in EFL classes.

8. Sixty-Five (65.4%) of teachers believe that lack of ICT devices in secondary schools impedes teaching reading comprehension in EFL classes.

9. Fifty-Five (55.6%) of students in table No. (4.1.C) agree with the statement class rooms are not equipped with ICT devices in secondary schools.

10. Seventy-Four (74.5%) of students in table No. (4.13.c) agree with the supposes students prefer to use computer and internet ICT devices in classrooms.

The major constraints faced by the students are as follows:

i. Students' weak competence in EFL classes.

ii. Students' interest in the technology itself and not of the teacher behind using this technology.

iii. Students' dependence on the teacher completely.

iv. Technical problems especially with the internet.

v. Insufficient time for the practice of EFL reading comprehension.

The major constraints faced by the teachers are as follows

i. Most EFL secondary schools teachers think that the use of any technology will minimize their roles in the classroom.

ii. The insufficient training in the use of technologies computer and internet

iii. Lack of experience in teaching EFL reading comprehension using the new technologies.
iv. Administration constraints (equipments, time schedule, financial support…etc)
v. Overcrowded in reading groups.

All these constraints represent in fact a challenge for both teachers and students.

5.2 Recommendations

With emphasis on results of the study we thought it is important to provide both teachers and students with some suggestions and recommendations for the efficient use of ICT devices in teaching and learning reading comprehension in EFL classes.

a. Using ICT economizes time and help teachers to provide more materials and information.
b. There should be continuous technical training for teachers.
c. The problems of big number of students in EFL classes should be solved.
d. Using ICT devices for teaching in EFL classes should be mandatory in the future.
e. Limited of school budget should be solved.
f. Technical problems of electricity should be solved.
g. The time allocated to teach with ICT devices should be enough for teachers and students.
h. Teachers should use CDs - room, projectors and flash card in teaching reading comprehension in EFL classes to help students in learning.
i. Ministry of education should include new competencies in the curriculum in secondary schools.
j. Teachers should take into account students' age, interest and level during teaching reading comprehension in EFL classes with ICT devices.
k. Students should not depend completely on the teacher because this will never help them to be experienced in using ICT devices by themselves.
l. Extra work (pair and group work) help students to exchange knowledge in using ICT devices in studying English.
m. Ministry of education should motivate and reward teachers to use ICT devices to teach English.

The researcher hopes these recommendations will be useful and beneficial for EFL secondary schools teachers and students, especially those who have not had experienced yet of interacting with technologies in teaching and learning English language.
5.3 Suggestions for Further Studies

Further studies about using ICT devices in teaching reading comprehension in EFL classes in secondary schools need more empirical studies in the area such as:

a) Using ICT devices in teaching Vocabulary.

b) Training teachers and students in using ICT devices in secondary schools.

c) Difficulties in using ICT devices in secondary schools.

d) Using ICT devices in teaching listening skills.

e) Impact of ICT in teaching English.

f) Advantages and disadvantages of using ICT in teaching English.

There is no doubt that using ICT devices in education improves teacher's instructional process and facilitates students’ learning process.
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Dear, Sir

The following questionnaire is mainly designed to help in gathering views about a study for a PhD research. Entitled: *Investigating the Role of Information And Communication Technologies in Teaching Reading Comprehension in EFL Classes.*

I would be grateful if you tick the box that best indicate your point of view.

1. Technical staffs and ICT devices are not enough in secondary schools.

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<tr>
<th>Strongly Agree</th>
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2. Transferring teachers has a negative impact in teaching English.

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3. Lack of institutional support in secondary schools impede teaching with ICT devices.

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4. There should be continuous technical training for teachers.
5. The problems of the large number of students in classes impede teaching with ICT devices.

6. Using ICT devices should be mandatory if it is possible for teachers and students in the future.

7. Connecting classrooms online while teaching reading comprehension in EFL classes.

8. Ministry of education should help teachers and students to use ICT devices in teaching and learning English.

10. Irregularity of electricity current impedes teaching with ICT devices.

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</thead>
</table>
The following questionnaire is mainly designed to help in gathering views about a study for a PhD research. Entitled: *Investigating the Role of Information and Communication Technologies in Teaching Reading Comprehension in EFL Classes.*

**Dear Sir,**

I would be grateful if you tick the box that best indicates your point of view.

1. **The availability of computer Labs use in secondary schools.**

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<th>Strongly Agree</th>
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2. **ICT devices implementation in secondary schools is not done properly.**

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3. **Lack of knowledge and experience of teachers in using ICT devices impedes in EFL classes.**

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4. High cost of ICT devices in secondary schools is a big problem.

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5. Insufficient and ineffective training for teachers in secondary schools to use ICT devices is not enough.

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6. Chat, audio and video conferencing are not available in secondary schools to teach reading comprehension in EFL classes.

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7. Computers and internet are available ICT devices in Sudan compared with other devices.

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8. The time allocated to teach reading comprehension in EFL classes is not enough.

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<th>Strongly Agree</th>
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9. Electronic mails for teachers and students should be used for communication.

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<th>Strongly Agree</th>
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</table>
10. Irregularity of electricity current impedes using ICT devices.

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<th>Strongly Agree</th>
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11. Lack of school budget is a big problem in secondary schools.

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12. Teachers should use ICT devices to improve students’ performance in English.

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</table>
The following questionnaire is mainly designed to help in gathering views about a study for a PhD research. Entitled: *Investigating the Role of Information and Communication Technologies in Teaching Reading Comprehension in EFL Classes.*

Dear students,

I would be grateful if you tick the box that best indicates your point of view.

1. Class rooms are not equipped with ICT devices.

2. Lack of computers in classrooms impedes teaching reading comprehension in EFL classes.


4. The miss-use of ICT devices is a problem in secondary schools.
5. Insufficient and ineffective training for teachers' in secondary schools to use ICT devices is not enough.

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7. The use of ICT devices makes teaching reading comprehension in EFL classes more interesting than other skills.

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8. Lack of ICTs skills in secondary schools is a big problem.

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9. The Setting up of computer labs facilitates using ICT devices.

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<th>Strongly Agree</th>
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10. ICT devices will solve all students' problems in learning English in the future.

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</table>
11. Slides and over head projector help in understanding reading comprehension in EFL classes.

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12. The use of flash card helps in learning reading comprehension in EFL classes.

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13. Students prefer to use computer and internet device in EFL classes.

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14. The use of CD-room is very useful in teaching reading comprehension in EFL classes.

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15. Using ICT devices in teaching reading comprehension in EFL classes motivate students to be creative.

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