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The Effectiveness of Using Interactive Digital Videos on Developing Sixth Graders' English Reading Skills and Vocabulary learning and Retention

فاعلية استخدام الفيديو الرقمي التفاعلي في تطوير الفهم القرائي،
وتعلم المفردات واستبقائها لدى طلبة الصف السادس

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إقرار

أنا الموقع أدناه مقدم الرسالة التي تحمل العنوان:

The Effectiveness of Using Interactive Digital Videos on Developing Sixth Graders' English Reading Skills and Vocabulary learning and Retention.

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نتيجة الحكم على أطروحة ماجستير

بناءً على موافقة عمادة البحث العلمي والدراسات العليا بالجامعة الإسلامية بغزة على تشكيل لجنة الحكم على أطروحة الباحث/ أشرف أحمد سليمان كحيل لنيل درجة الماجستير في كلية التربية/ قسم مناهج وطرق تدريس وموضوعها:

فاعلية استخدام الفيديو الرقمي التفاعلي في تطوير الفهم القرآني، وتعلم المفردات واستبقائها لدى طلبة الصف السادس

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واللجنة إذ تمنحه هذه الدرجة فإنها توصيه بتقوى الله ولزوم طاعته وأن يسخر علمه في خدمة دينه ووطنه.

والله ولي التوفيق،،،

عميد البحث العلمي والدراسات العليا

م. مازن اسماعيل هنية



Abstract

The Effectiveness of Using Interactive Digital Videos on Developing Sixth Graders' English Reading Skills and Vocabulary learning and Retention.

Study Aim: This study aims to investigate the effectiveness of using **IDVs** on developing sixth graders' English reading skills and vocabulary learning and its retention.

Study Approach: To achieve this aim, the researcher adopted the experimental approach and recruited a sample of (82) EFL male learners studying at Al-Motasem Bellah Elementary School for Boys. (A) – Gaza West directorate.

Study Sample: The researcher chose the study sample from 6th graders, two out of four classes in the school, and randomly assigned one class as the experimental group consisting of (41) students and the other as the control group consisting of (41) students. The traditional method was used while teaching the control group, while IDV were used with the experimental one in the second term of the school year (2016-2017).

Study Tools: The researcher used 5 instruments to collect data: 1) A content analysis card of (24) items for the reading comprehension texts of English for Palestine 6B. He used Holsti's equation to count the reliability of the analysis.

2) A checklist for teachers to determine the most important reading comprehension skills, 3) A pre and post reading comprehension test, 4) A pre and post vocabulary test, 5) A delayed vocabulary retention test held after two weeks of the post vocabulary rest.

Study Findings: The study results revealed that IDVs were effective in developing reading comprehension, and in learning and retaining vocabulary.

The findings indicated that there were significant differences in the mean scores of the experimental group and that of the control group in the post reading comprehension test, the post vocabulary test and the delayed vocabulary retention test in favor of the experimental group, which was attributed to the effectiveness of IDV.

Study Recommendations: Based upon the previous findings, the study recommends that EFL Palestinian teachers should adopt the use of IDVs so as to develop students' reading comprehension, and to acquire and retain vocabulary.

ملخص الدراسة

فاعلية استخدام الفيديو الرقمي التفاعلي في تطوير الفهم القرائي، وتعلم المفردات واستبقائها لدى طلبة الصف السادس

هدف الدراسة: هدفت هذه الدراسة الى التعرف على فاعلية استخدام الفيديو الرقمي التفاعلي في تطوير الفهم القرائي، وتعلم المفردات واستبقائها لدى طلبة الصف السادس.

منهج الدراسة: من أجل تحقيق الهدف من الدراسة استخدم الباحث المنهج التجريبي ذو المجموعتين، احدهما ضابطة والاخرى تجريبية.

عينة الدراسة: طبقت الدراسة على عينة مكونة من (82) طالبا من طلاب الصف السادس المسجلين بمدرسة المعتصم بالله الابتدائية (أ) التابعة لمديرية غرب-غزة. قام الباحث باختيار عينة الدراسة و المتمثلة بصفين من بين اربعة صفوف ، حيث عين احدهما كمجموعة تجريبية مكونة من (41) طالبا والاخرى كمجموعة ضابطة مكونة من (41) طالبا. استخدم الباحث الفيديو الرقمي التفاعلي في تدريس المجموعة التجريبية، فيما استخدم الطريقة التقليدية في تدريس المجموعة الضابطة وذلك خلال الفصل الدراسي الثاني لعام 2016-2017.

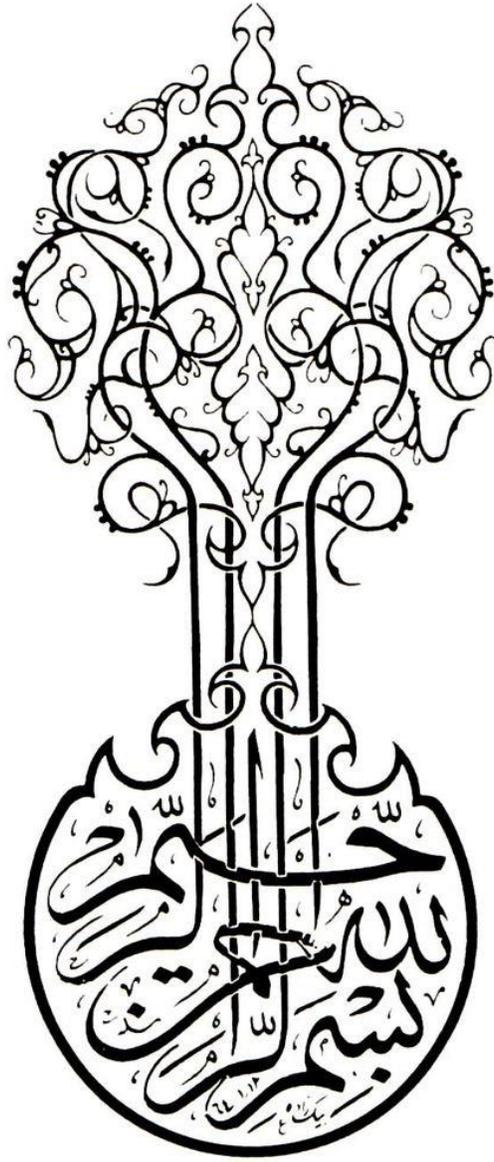
أدوات الدراسة: ومن أجل جمع البيانات، قام الباحث بتجهيز واستخدام الأدوات التالية:

- 1) بطاقة تحليل محتوى مكونة من (24) فقرة بهدف تحليل دروس القراءة للصف السادس لتحديد المهارات القرائية وقد تأكد من ثبات التحليل من خلال تطبيق معادلة "هولستي".
- 2) استبيان للمعلمين لتحديد اهم مهارات الفهم القرائي.
- 3) اختبار فهم قرائي قبلي وبعدي.
- 4) اختبار مفردات قبلي وبعدي.
- 5) اختبار المفردات المؤجل حيث عقد بعد أسبوعين من اختبار المفردات البعدي.

نتائج الدراسة: كشفت الدراسة عن فاعلية الفيديوهات الرقمية التفاعلية في تطوير الفهم القرائي، وتعلم المفردات واستبقائها. حيث تشير النتائج الى وجود فروق دالة احصائيا بين متوسطات درجات المجموعتين التجريبية والضابطة في كل من: اختبار الفهم القرائي البعدي، اختبار المفردات البعدي واختبار المفردات المؤجل لصالح المجموعة التجريبية وتعدى هذه النتائج الى استخدام الفيديوهات التفاعلية في تعليم المجموعة التجريبية.

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﴿وَمَا تَوْفِيقِي إِلَّا بِاللَّهِ عَلَيْهِ تَوَكَّلْتُ وَإِلَيْهِ أُنِيبُ﴾

[سورة هود: 88]

Dedication

I WOULD DEDICATE MY WORK TO

My beloved country,
Palestine

The great Martyrs and Captives,
The symbol of sacrifice.

My university,
“The Islamic University of Gaza”.

The memory of my Father,
The man who earned an honest living for us.

My Mother,
The strong and gentle soul who taught me to trust in Allah, believe in
hard work and that so much can be done with little.

My dear Sisters,
Who have been encouraging and supporting me.

My beloved wife,
Who did her best to help me achieve my ambition.

My little kids,
Ahmed, Yazan, Lama & Hazem

All relatives,
Who lighted my way towards success.

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In the Name of Allah, the Most Gracious, the Most Merciful

"All praise be to Allah, the One to Whom all dignity, honor, and glory are due. The One Who ordered Prophet Muhammad, peace and blessings of God be upon him, " Read in the name of your Lord who created, Created man from a clinging substance, Read, and your Lord is the most Generous, Who taught by the pen, Taught man that which he knew not."

As our Prophet Muhammad, peace be upon him, said, "He who is thankless to people, is thankless to Allah", I therefore gratefully acknowledge the many people who so graciously supported and helped me so as to successfully complete this work. This dissertation was possible only with their encouragement, guidance and support.

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Chapter I

Background of the study

Chapter I

Background of the study

1.1 Introduction

Language is a primary source of communication. It is the method through which people share ideas and thoughts with each other. Nowadays, English is considered as the most commonly used language among foreign language speakers all over the world. Countries, associations and people devote much of their time and effort to teach and learn English since English has become dominant in many different fields. English also has become a necessity for people if they want to enter a global workforce, access to a great wealth of entertainment, being able to have a greater cultural understanding, communicate with people from any country in the world and create many opportunities that surely change matters for better.

Consequently, English as a language has become an essential demand for all levels and in different fields. This led to teaching English from grade one to grade twelve in Palestinian schools. Keshta (2000, p.4) clarifies that "English language through the years has become increasingly important, not only in the West but also in the Middle East and the rest of the world. He maintains that English has become the common language between people from different backgrounds. In the Middle East, governments provide programs for English language in almost every school and university."

However, teaching and learning English is not that easy thing. In fact, the way teachers present English as a new language to their pupils plays a great role in their development. So, teachers should always work hard on finding new ways and methods that enhance the acquisition of this new language, they should not stick to traditional ways which may impede the desired goals. And to do so, teachers should always be updated with new techniques and tools that their pupils would prefer much.

In fact, brilliant teachers, who really would like to use whatever preferable to their students should always put in their consideration some questions that may help them achieve the desired goals and enhance the teaching learning process:

- How to help students acquire and produce English better than ever before.
- How to make English learning an enjoyable process more than ever before.
- How to engage and involve pupils as much active as possible in the teaching learning process.

- How to make use of everyday technology to help students learn English more easily than ever before.

The researcher considers teaching and learning English in traditional classrooms where students learn inside the classroom with traditional methods as a boring matter for a lot of learners, so the researcher tried to find something exciting and more interesting for the learners to learn English well.

In order to learn English and any other language successfully, one must acquire its grammar, vocabulary, pronunciation and its four skills: speaking, listening, writing and reading. Accurate and adequate vocabulary influences language comprehension more than grammatical correctness in effective communication. In this regard, (Wilkins, 1972, p.111) emphasizes that “Without grammar very little can be conveyed, without vocabulary nothing can be conveyed”. In a similar vein, (Harmer, 1993, p.162) states, "If language structures make up the skeleton of language, then it is vocabulary that provides the vital organs and the flesh." In this regard, the researcher as an English teacher considers vocabulary as the cornerstone by which English learners can dash towards being good users of English and towards mastering the other skills of English language. He believes that vocabulary is an advanced demand and a key factor for a successful progress in the other language learning fields. The researcher also believes that the more a learner has vocabulary as an input, the more he's going to progress and master other skills as an output.

Harley (1996) states that if students did not have an adequate knowledge of relevant vocabulary, they will directly face difficulty when dealing with the tasks required of them by teachers in their schools. In addition, Laufer (1992) considered vocabulary as the most effective and important factor in academic achievement for L2 learners. Such beliefs leads us to believe that accurate and adequate vocabulary influences the other conditions of English language learning process . It also shed light on the importance of vocabulary learning in language proficiency and academic achievement. Over here, and as teachers, we must always ask ourselves " Is there an ideal method that we can all use in teaching vocabulary to our pupils?, or we should update our knowledge of teaching methods as much as possible!." In fact, English teachers should not be restricted to one way in teaching vocabulary since it would be boring and useless. Good teachers should always evaluate their students' progress in vocabulary acquisition, and according to that, they should look for new and suitable methods that may work better.

Nowadays, due to the same previous reasons, it is accepted that vocabulary acquisition should be part of the syllabus design. The importance and the resulting of vocabulary learning that is connected with the development and success in the other aspects of language learning advocate the calling for paying much more care and concern while designing and preparing syllabus and curriculums.

Another crucial skill of learning English language that is correlated with learning vocabulary is reading skill. The researcher believes that the more his pupils read, the more they learn and master the language. Pupils need to read because reading is a rich route towards knowledge. Reading leads learners to the world of knowledge, literature appreciation and enjoyment, being cultured and well educated and do everyday activities that are part of modern life, such as job listings, instruction manuals, reading newspapers, maps and so on. Mikulecky (1986) indicates that reading guides readers learn how to think in the new language; it helps one build better vocabulary, be more comfortable with written English, and practice English when one lives in a non-English-speaking country.

Harmer (2007, p.99) states that reading is not only fruitful for pleasure, study, and careers, but also for language acquisition. He further adds that reading provides a good model for English writing, provides opportunities to study vocabulary, grammar, and punctuation, and demonstrates the way to construct sentences, paragraphs, and whole texts. The NRP (2000) found that reading comprehension is an active process that requires an intentional and thoughtful interaction between the reader and the text that can be explicitly taught through text comprehension instruction.

According to the National Reading Panel (2000), "The reading ability plays a central role in the teaching learning success at all educational stages. Having any difficulty with such a skill like reading will result in a variety of consequences on all subjects of study; for reading includes various sub-skills such as: discrimination of linguistic symbols, coordination between the symbols and the suitable meanings, using the context to recognize the lexical meaning, the ability of visual analysis of words to recognize their ingredients, the ability of sound discrimination, coordination between the symbols seen by the reader and the corresponding sound, the good comprehension of a reading text, and understanding further meanings or meanings implicitly included within the lines."

In fact, Reading is a complex process that is strongly correlated with practice. There are specific aspects of reading, such as fluency and word recognition, which can be learned in a few years. These basics must be mastered but at the same time reading

comprehension should be emphasized in the process. Students can parrot words on a page all day long, but if they do not have the necessary comprehension skills they will not be able to make predictions, monitor their understanding of content, sequence or characters, clarify confusing parts of the text, or connect what they are reading to their own experience or prior knowledge.

Therefore, reading cannot be considered as a passive activity in which learners are filling up their heads with information and knowledge. On the other hand, it is an interactive activity in which learners are actively connecting the new content they are reading with their prior knowledge and experiences. According to Kirby(2006, p.161) "The process of comprehending involves decoding the writer's words, and then using background knowledge to construct an approximate understanding of the writer's message".

The researcher believes that reading comprehension is an essential skill that enables students to acquire knowledge and it paves the way for any good education. If readers read without comprehension, the aim of reading is not fulfilled.

To conclude, one important basic goal that should always be taken in consideration while teaching reading is enabling student to gain understanding. Many students can read fluently but fail to answer when asked about what they have just read. This vision indicates that fluent readers are not necessarily good readers.

From the previous lines we can draw a conclusion that vocabulary learning and reading comprehension are strongly correlated processes. Each one of them is a hard base for the other. Research regarding vocabulary and word knowledge shows that there is a high and strong correlation between knowing vocabulary and comprehending the text (Beck, McKeown, & Kucan, 2008). The Report of the National Reading Panel (2000) states: " The importance of vocabulary knowledge has long been recognized in the development of reading skills".

Huang (1999, p.43) indicates that second language learners need to develop their receptive and productive vocabulary knowledge and they also need to increase their vocabulary size. (Bernhardt & Kamil, 1995) add , when readers' vocabulary size is increased, their use of language skills directly increases and their knowledge of the world also becomes broader. A larger vocabulary enhances other language skills of second language learners. In order to effectively read in the language, language learners must acquire as much vocabulary as they can.

Perfetti,& Hart (2001) indicate that, "It is important to mention that fluent reading depends on high-quality lexical representation and this is based on, "Lexical Quality Hypothesis" according to which learners ability to know words thoroughly may be one of the best indicators of reading ability levels. Many ESL/ EFL studies confirm the relationship between vocabulary knowledge and reading comprehension. However, the degree at which these two constructs relate is still controversial."

As indicated by the researchers previously, "reading a content and comprehending it require that one possess sufficient vocabulary. The relation between vocabulary knowledge and reading comprehension is dynamic and complex. One way of looking at it is to divide it up into two major directions of effect. "The effect of reading comprehension on vocabulary knowledge or growth, and the effect of vocabulary knowledge on reading comprehension" (Nation & Hu, 2000, p.403).

The researcher noticed that Palestinian students' reading comprehension skills are poor as they lack the ability to comprehend their reading textbook selections. This is quite clearly manifested in their exam results. So, it is an important issue for teachers to pay attention to the strategies and techniques of teaching reading for the purpose of comprehension. According to (El Kahlout, 2010, p.4), the majority of teachers prefer using teaching methods which greatly depend on memorizing rules and structures. Students are not given the opportunity to acquire language skills or to use language effectively. Hence, teachers are in need for new techniques and strategies that interpret language not only as vocabulary, sentences or structure, but also as a practice of thoughts and culture.

In this respect, and according to Abdal Rahim(2015), one can safely say that teachers need to employ classroom instructional strategies that facilitate students' construction of their own meanings. Teachers also need opportunities to learn and use new strategies and adapt such strategies to their own situations and teaching needs.

In recent years, there has been an exponential growth in the availability of technological tools. Children spend much of their time enjoying playing on computers, mobile phones, lab tops, touch pads, tablets and many other devices. Every day, we hear about an emersion of new enjoyable apps and devices.

Video is a powerful and rich medium that is used in both, teaching and learning process. In videos, Information can be presented in an attractive and consistent manner. Such multimedia is a real joy for our children, but it may become boring if still presented in a traditional way.

According to Kozma(1986, pp.11-19) "Prior studies have investigated the effect of instructional video on learning outcomes However, the instructional video used in early studies were primarily either broadcasted through TV programs or stored on CD-ROMs. The linear nature of such video instructions produced inconsistent results."

Recent advances in communication and multimedia technologies have resulted in powerful learning systems with instructional video components. The emergence of non-linear, IDV technology allows students to interact with educational video. This surely enhance learner engagement, and so improve learning effectiveness.

Likewise in Salomon, Perkins and Globerson,(1991) "A major 'media attribute' of interactive video is random access to video content users can select or play a segment with minimal search time. The concept is not new but is taking on new forms"(pp.1-9).

Therefore, the researcher conducted this study to investigate the effectiveness of using interactive digital videos on Palestinian sixth graders' reading comprehension, vocabulary and its retention. For this purpose, the researcher has selected two units from English for Palestine 6 textbook for teaching reading comprehension, vocabulary and its retention through using interactive digital videos.

1.2. The need for the study

The need for this study emerged from the fact that vocabulary and reading skills, which are bases that form the greater part of the language and parts of the Palestinian syllabus aims, play a great role in developing learners' English competences. And to develop such skills learners should use effective means that facilitate their English language learning and help them to be successful learners. An Interactive video is a good mean that provides individual control over random access to content that may lead to better learning outcomes and higher learner satisfaction.

1.3. Statement of the problem:

Through his eleven years' experience of teaching English language, the researcher has observed that students really face great difficulties in English reading comprehension skills, vocabulary achievement and its retention. These difficulties might be as a result of ineffective traditional teaching methods, which finally affect their reading comprehension, vocabulary learning and its retention. Thus, the researcher feels that there is a bad need to use new strategies to solve the students' problems they face in reading comprehension, vocabulary and its retention.

1.4. Research major question:

The present study major question was formulated as follows:

What is the effectiveness of using interactive digital videos on developing sixth graders' English reading skills and vocabulary learning and retention?

1.4.1. Study Sub-questions:

From the previous mentioned major question, the following sub-questions were derived:

1. What are the main reading skills intended to be developed among sixth graders using interactive digital videos?
2. What are the main vocabulary items intended to be developed among sixth graders using interactive digital videos?
3. What are the main characteristics and the structure of the interactive digital videos that can be used in teaching reading and vocabulary to sixth graders?
4. Are there statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group and that of the control group in the post reading comprehension test?
5. Are there statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group and that of the control group in the post vocabulary test.
6. Are there statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group subjects in the post vocabulary test and that of the delayed vocabulary retention test?
7. Are there statistically significant differences between the mean scores of the experimental group subjects and that of the control group in the delayed vocabulary retention test?

1.5. Research Hypotheses:

In order to address the research questions, the following null hypotheses were tested:

1. There are no statistically significant differences at ($\alpha \leq 0.05$) in the post test results between the mean scores of students who learn reading skills through IDVs (experimental group) and those of students who learn reading skills through the traditional method (control group).
2. There are no statistically significant differences at ($\alpha \leq 0.05$) in the posttest results between the mean scores of students who learn vocabulary through IDVs (experimental

group) and those of the students who learn vocabulary through the traditional method (control group).

3. There are no statistically significant differences at ($\alpha \leq 0.05$) in the mean scores of the experimental group between the vocabulary posttest and those of the delayed one.

4. There are no statistically significant differences between the mean scores of the experimental group and that of the control group in the delayed vocabulary retention test.

1.6. Significance of the study

This study may prove significant since it seeks to achieve the following:

1. Improving the performance of the sixth graders' in their reading skills.
2. Enhancing vocabulary learning among sixth graders.
3. Developing the students' motivation towards learning English language as a result of using interactive digital video.
4. Familiarizing English Language teachers with the use of interactive digital video in teaching vocabulary and reading skills.
5. Help English language instructors in organizing an effective teaching-learning environment through using IDVS.
6. Benefiting supervisors while conducting training materials and courses for English teachers to raise their awareness of the importance of using interactive digital video in teaching reading and vocabulary.
7. Encourage new researchers to do more studies about using IDV in developing other skills such as listening, speaking and writing.

1.7. Purpose of the study:

The Study aimed to achieve the following objectives:

1. Identifying the impact of using interactive digital video on the sixth graders' achievement in English vocabulary in West Gaza Governorate.
2. Identifying the reading comprehension skills and sub-skills intended to be developed among sixth graders.
3. Providing English language teachers an opportunity to become familiar with the basic principles of designing, and using an interactive digital video in teaching vocabulary and reading skills.

4. Teaching English language vocabulary and reading skills in an interactive and interesting way.
5. Helping syllabus designers to organize and enrich English Language curricula with activities based on interactive digital video technique.
6. Identifying more efficient and meaningful ways in teaching English vocabulary and reading skills.
7. Examining students' retention of English language vocabulary as a result of using the interactive digital video technique.

1.8. Limitations of the Study

1. This study is applied at **Al-Motasem Bellah Elementary School for Boys.**, Gaza West directorate.
2. This study is carried out in the second term of the scholastic year(2016-2017).
3. This study is limited to the effectiveness of using interactive digital video technique on students' reading skills and vocabulary learning and retention.
4. This study is limited to unit 13,15 from "English for Palestine 6" students' book.
5. The tools of the study were built by the researcher.
6. The generalization of the results will be limited to Al-Motasem Bellah Elementary School for Boys.

1.9. Operational Definitions of variables and terms

1.9.1 Effectiveness:

The degree to which something is successful in producing a desired result. "Effectiveness is the capability of producing a desired result. When something is deemed effective, it means it has an intended or expected outcome, or produces a deep, vivid impression" (Wikipedia, 2017).

The researcher defines effectiveness as "The change in the learners' achievement level in English reading skills and vocabulary learning & retention that may result from using interactive digital videos.

1.9.2. Interactive digital video:

It is a digital multimedia presentation that can take users' input to perform some action. Such type of multimedia incorporates a wide variety of interactive elements directly into the video itself, including hotspots, questions, calculations and more. Such videos

play like regular videos, but include variety of clickable areas, or "hotspots," that perform a specific action when you click on them.

1.9.3. Developing:

Growing something and making it become more mature, advanced, or elaborate.

1.9.4. Reading comprehension

It is an intentional thinking during which meaning is constructed through interactions between text and reader (Hodges, 1995, p.207).

The researcher defines Reading comprehension as the ability to read text, process it, and understand its meaning.

1.9.5. Reading skills:

Reading skills refers to some specific abilities which enable learners or readers to read anything written with independence, comprehension and fluency. They are represented in cognitive and metacognitive processes including skimming, scanning, prediction, monitoring, making inferences, guessing meaning of words from context and summarizing.

1.9.5.1. Skimming:

According to Kiddey (2001) " Skimming refers to how to teach pupils the way to gain a general impression of the main ideas of a text".

According to the researcher, Skimming is reading quickly to gain a general idea.

1.9.5.2. Scanning:

The researcher adopted the definition of (Kiddey, 2001, p.10) which defines it as " Teaching learners how to find specific details quickly such as places, names and dates in the texts".

1.9.5.3. Guessing meaning of words from context:

Guessing from context refers to the ability to infer the meaning of an expression using contextual clues.

1.9.5.4. Inference:

A guess that you make or an opinion that you form based on the information that you have based on primary reading processes.

1.9.5.5. Prediction:

According to Grellet (1981, p.17), prediction refers to “The faculty of predicting or guessing what is to come next, making use of grammatical, logical and cultural clues”.

The researcher defines it as a strategy in which readers use information from a text (including titles, headings, pictures, and diagrams) and their own personal experiences to anticipate what they are about to read

1.9.6. Vocabulary:

A set of words presented in each unit of the Palestinian English textbook "English for Palestine 6th grade". Which are intended to be taught to the pupils.

1.9.7. Learning:

The process of acquiring new, or modifying and reinforcing existing, knowledge about something, specifically about words and vocabularies.

1.9.8. Vocabulary retention:

The ability to save taught words in mind and recall them once again when needed to be used in different contexts.

1.9.9 Sixth graders

Sixth graders are students aged between 11-12, and enrolled at Palestinian governmental schools, as well as studying English for Palestine 6 textbook.

Chapter II

Literature review

Chapter II

Literature review

Section (A) - Theoretical framework

This chapter is divided into two sections. The first includes the theoretical framework and consists of three parts. The first part discusses the IDV technique; the second part discusses reading comprehension and the third part tackles vocabulary and its retention. The second section deals with the findings of previous studies related to the topic of the current study.

Part 1. Interactive digital video

2.1.1. Overview

Television was once the newest technology at homes. Years later came computers and videos. Today's kids are growing up in a rapidly changing digital age that is greatly different from that of their parents. A wide variety of technologies are all around us in our homes, and schools. When used wisely, technology and media can support learning and lead to amazing results. Once the researcher started implementing his experiment on the samples of the study, he firstly asked them about the best enjoyable way that they may prefer when learning English. Shy smiles at first, then most of them agreed that they prefer to learn it via computers, mobile and tablets.

Many previous researchers found that Video-assisted instruction (VAI) has had beneficial effects on learner achievement in a wide variety of instructional settings. Research has shown that VAI not only improves learner achievement, but can also reduce the amount of time necessary to accomplish the same amount of learning. In fact, the components of videos which includes sounds, images and other interactive effects makes such instructional tool more preferable and enjoyable for pupils. Videos are often preferred in educational environments because of features such as ease of use, accessibility and cost-effectiveness (McCauley, Jenckes, & McNutt, 2003).

Nowadays, educational video distribution over the Internet is a widespread practice. Together with the increase in the use of educational videos there is also an increase in the features that accompany these videos. Interactivity in educational videos is a relatively new trend with the level and types of interactivity to be in constant

evolution. This is evident from the appearance of new tools and online platforms for creating and hosting interactive videos.

Recently, computer and video technologies have been merged to form a new promising media known as "interactive video." With such new technology, the learners are shown a segment of video instruction and asked questions about that segment by the computer. Such process includes inputting and judging the learners' responses, providing feedback and reinforcement, and record keeping.

The excitement for such media arises from what experts see as the medium's greatest strength: interactivity. Interactivity implies that learners are always seen as active participants in the teaching - learning process. IDV compensate the passive aspects of traditional video by the activity encouraged and in many cases required by the computer control in IDV. The activity could be limited and be nothing more than deciding which topic to study next, or to advance to the next screen to reach a specified goal. The idea is that any media encouraging active participation on the part of the learner is better than a purely passive information presentation.

Wittrock (1989) states that, in order for learning to occur, learners must be, at a minimum, mentally active in the learning process. All computer-based instructional systems can mentally engage learners by directly involving them in learning. But because of the added dimension that video offers, interactive video surpasses other computer-based systems in its ability to involve the learner and engage him or her in a two-way dialog.

Iuppa and Anderson (1988). State, Well-designed IDV lessons encourage learners to interact positively with the visuals by giving them variety of choices such as interrupting, identifying, sequencing, and selecting from alternative actions. Students can interfere and interrupt videos when they identify problems in the scenario. They can stop the videos if they can not follow the logic or get lost. They can practice with concepts by matching words with pictures, matching sounds to words or identifying critical visual elements of concepts. For sequencing activities, learners can select appropriate psychomotor sequences or select options and be shown consequences visually and dramatically.

Martorella (1989) state that "Interactive video is more than a new trick, a new device or even a new technology". IDV as storage and hardware blends the elements once available only as separate media. IDV as learning concept creates an environment where the two-way dialog essential for learning has become a reality. Because costs are falling

and research has demonstrated the importance of interactivity, IDV is destined to play an important role in the future of education.

2.1.2. Interactive digital video definition

Most studies adopt a common definition about the interactive video: "A non-linear, digital video technology that allows students to have their full attention to educational materials and to review each section of video as many times as they wish" (Dimou et al., 2009).

Chen (2012) defines IDV as one of the most exciting and preferable types of media, which combine the power of moving images, the story of the video, the depth and wealth of the information enriched by interactivity.

(Petan & Vasiliu, 2013) also define it as "An improved copy of video material which includes interactive elements that provide a non-linear way to transmit information, similar to the World Wide Web hyperlinks".

Interactive video can be defined as a video material that learners can change the speed of, the flow of and decide the direction of and, overall, improve their communication with the educational environment (Moreno & Mayer, 2007).

In order to simplify and ease the understanding of IDV environments, we need to review the ways people are used to viewing and interacting with different video content. Current video players provide its users basic and limited control options. These options includes stop/play, fast backward / forward and slow motion streaming. The ruling view towards videos show it in a passive way as a nonstop medium in which user's interaction with the content is limited. For example, users cannot jump to another place inside or outside the video document that provides related information about a specific item in the video like a commercial product, a film character, or a concealed object. Hence, the viewing of the video is performed in a linear fashion where the only way to discover what is next is to follow the narration and move through the video guided by seconds and minutes. (Hammoud, 2006, p.5) indicates that, "Such traditional techniques for video browsing and viewing won't be efficient for users to get the crux of the video".

According to (Duffy, 2007), interactive video, which is an enhanced version of videos that adds interaction, has drawn attention in recent years. Interaction mentioned in interactive videos is between the individual and content. This interaction is a feature which allows answering to questions on the screen and navigating to different parts of the video according to these answers.

Interactive videos differs from nowadays common forms of videos that they accept and respond to the input made by users. The provided interactive features such as play and pause, allows users to pause the video, click on an object of interest in a video frame, and jump from a frame to another. Instead of being guided by seconds and minutes, the user of IV form navigates through the video in a very efficient non-linear fashion with options such as " next appearance" ,"previous scene" and "last event".

Hammoud (2006, p.5) defines IDV as "A digitally enriched form of the original raw video sequence, allowing viewers attractive and powerful interactivity forms and navigational possibilities".

The researcher defined IDV as a digital multimedia presentation that can take users' input to perform some actions. Such type of multimedia incorporates a wide variety of interactive elements directly into the video itself, including hotspots, questions, calculations and more. These videos play like common videos, however, they include hotspots and clickable areas that perform an action when clicking on them.

The following comparison shows the differences between the linear and non-linear forms of video:

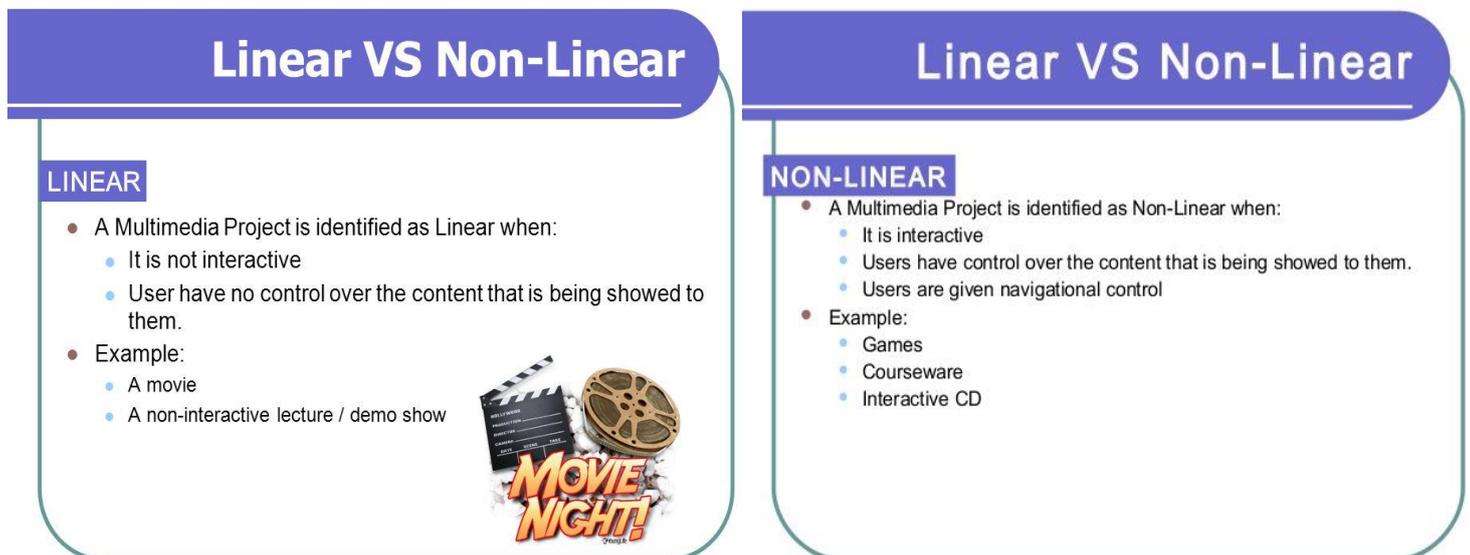


Figure (2.1) linear vs. Non- linear video. ©2017 slideplayer.com Inc.

2.1.3. levels of learning interactivity

Wouters et al. (2007) support that there are two levels of learning interactivity: The first level is the functional interactivity on students actions (e.g. feedback after the student's answer.) The second level concerns cognitive interactivity which involves calls for actions that trigger cognitive and meta cognitive processes. For example, a challenge

to predict what will happen next in the video, provokes students to select and organize information and incorporate it into their pre-existing knowledge. These interactive behaviors seem to have significant learning results (Wouters et al., 2007). A crucial element of the interactive video is that it can become a platform for self-regulating learning environments (Chen, 2012; Delen, 2014; Hartsell&Yuen, 2006). The possibility of controlling the individual speed, the offering of links which help avoiding cognitive overload (Chen, 2012), the possibility to seek or overtake a specific portion of the video and the ability to watch a specific portion again if needed (Zhang et al., 2006) provides a useful self-regulated instructional context where reduced levels of embarrassment or anxiety allow learners to be comfortable enough to learn new content (Pendell et al. 2013).

How do students interact with the video? While a student is watching a video, a question or prompt to discuss the topic appears on the screen, pausing the video. Students can then respond appropriately, after which, the video resumes.

2.1.4. The importance of IDV

“Tell me and I will forget. Show me and I might remember. Let me try and I will know it forever!”

Technological materials are becoming an increasingly important tool in the educational environment (Aparicio, De Buenaga, Rubio, & Hernando, 2012). Video breaks down complex ideas into digestible bites that can be easily processed. It reduces the reading load for the learner, by presenting the content as engaging visuals. Video presents information using a narrative, allowing the learner to retain the content more effectively. Lengthy videos alone are not enough, as learners have limited attention spans. By using interactive videos, teachers can overcome this and maintain learners’ engagement.

The importance of adopting videos and making use of it through the teaching learning process emerged from the fact that learners greatly enjoy watching videos. They also like to gain information from short video format. The following numbers proves the assumption which asserts that videos are highly preferred media for learners. Here are some YouTube stats according to (YouTube status summary, AUG 10TH, 2017 - AUG 23RD, 2017):

- There are more than a quarter million run over the site per second

- People spend about four billion hours while watching YouTube video monthly.
- About 72 hours of video is uploaded every minute.
- YouTube had more than a trillion views of videos until Aug 2017. That's about 140 views for every person on the planet

(Salomon, Perkins & Globerson,1991, pp.2-9) state "Recent advances in multimedia and communication technologies have resulted in powerful learning systems with instructional video components. The emergence of non-linear, interactive digital video technology allows students to interact with instructional video. This may enhance learner engagement, and so improve learning effectiveness. A major 'media attribute' of interactive video is random access to video content. users can select or play a segment with minimal search time. The concept is not new but is taking on new forms".

Interactive video, which is an enhanced version of videos that adds interaction, has drawn attention in recent years. Interaction mentioned in interactive videos is between the individual and content. This interaction is a feature which allows answering to questions on the screen and navigating to different parts of the video according to these answers (Duffy, 2007). Moreover, Interactive videos transform the learning experience from one-way communication, to an exchange of information, with the learner taking on an active role. An interactive video incorporates a wide range of interactive elements directly into the video itself, including click to reveal, questions, hot spots, voting polls and many more. Any video can be made interactive, with almost limitless interactions, driving deeper engagement.

Interactive video has the ability to yield increased learner engagement and retention, therefore increasing learner performance and growth.

In fact, interactive video platforms provide students and teachers a place to have face-to-face interactions without being in the same geographical location. Teachers can –and should– utilize interactive video platforms to enhance their students' experiences and increase engagement and retention. Moreover, Interactive video has been shown to increase attention, recall, satisfaction and time spent watching a video. Such increases and advantages rises from the fact that IDV allows the users to react to what they were seeing and to be more than just observers. Users interact by clicking or touching “hot-spots“ and by receiving additional information or feedback about their knowledge.

IDV additionally presents a great Feedback to the learner through its branching scenarios, it tells the user he is wrong, why he is wrong and how to fix that. The course

acts like a trainer by guiding the learners in the right direction instead of telling them directly “go there – do that”. Student also receive reinforcement when having correct actions or answers. Such property encourages students to be more responsible for their learning and helps them to benefit from their actions on the future.

(Dede, 1987) states, "Any visual media delivery system capable of supporting learner interactivity while at the same time facilitating interconnectivity of images and symbols has the potential to become an extremely powerful educational tool".

One of the many goals of education is to create independent learners who are capable of managing their own learning environments; learner productivity improves with independence. (Reigeluth & Stein, 1983). IDV instruction greatly promote the goal of the independent learner by providing the learners opportunities to control their learning environment. "The importance of learner control in interactive video instruction is that it allows students who are at different levels of academic and computer skills to learn at a pace that is comfortable for them". (Zollman & Fuller,1994).

The researcher noticed that students nowadays are interested in technology more than ever before. They enjoy using Ipads, tablets, laptops and mobile phones and are ready to spend hours on them. From such point, the researcher decided to make use of these media to enhance his students learning. To do so, he adopted the IDV technique as it represents an effective tool that guarantees students’ engagement and interaction. He believes that such technique develops positive attitude toward self-learning and encourages student to be more responsible for their learning.

2.1.5. IDV as an educational environment

IDV encourages EFL students to think more actively about what they are reading and, therefore, improve their comprehension abilities in general and perhaps learn more about what they are reading. also helps teachers to activate a learners' prior knowledge concerning a topic or subject and it promotes research, active reading and inquisition. The following are some of the characteristics of IDV educational environment:

2.1.5.1. Promoting active learning

Active learning has become an important factor of education success and it involves other activities that learners do together in class apart from simply listening to lectures. Studies show that students comprehend the topics better and also retain them for long if

they can actively react to course material. IDV fosters active learning through enabling learners to interact positively in the learning process.

2.1.5.2. Encouraging academic success

Because learners learn actively using IDV, it is likely that they will become even more connected to class and the topics or subject matter. They will interact with class members and the teacher, increasing their chances for academic success. The great relationship between the subject and students as an essential part of IDV fosters student retention in school.

2.1.5.3. Enhancing learning

The prior knowledge that a student has usually affects the learner's performance. There is also a well-recognized relationship between learning comprehension and prior knowledge. Regardless of the ability of a student to read, high prior understanding of a certain subject area normally means better scores. Moreover, high prior understanding is also associated with enhancement of the learner's interest in specific topics.

2.1.6. Benefits of IDV

“Video, among other new technologies, offers education a challenge to rethink much of its methods and content, helping it tilt the balance away from teacher- centered instruction towards learner-centered study. It also offers the advantage of utilizing vision, that powerful but neglected sense, in new ways.” (Moss, 1983)

According to (Zhang, Zhou, Briggs & Nunamaker, 2005) Video provides students an opportunity to view real objects and actual scenes, to see sequences in motion, and to listen to narration. Extensive research has shown that students benefit from Video-supported e-learning. Some of the benefits are that it:

- Provides location and time flexibility.
- Save time and cost in favor of educational Institutions.
- Fosters and enhances self-directed and self-paced learning by enabling learner-centered activities.
- Creates a collaborative environment by linking each learner with physically dispersed experts and peers.
- Provides unlimited access to technological learning material.
- Updates and maintains knowledge in a more timely and efficient manner.

According to (Esclada,1995) IDV has the following capabilities:

- It provides random access, step frame, still frame, and slow play capabilities found in standard videodisc technology.
- It provides the capability of collecting two-dimensional spatial and temporal data about any object on the screen.
- It provides the capability to process or change the sequence of images and play the revised video.
- Most importantly, it gives the control of the learning situation to the teacher and
- students. This enables students to answer their own inquiries and do so at a pace that is comfortable for them.

The researcher adopted IDV in his research as an independent variable, since he believes that interactivity provided by IDV provides students a great chance to be responsible of their leaning. He believes that IDV help learners to choose what to learn, when to learn and how to learn in accordance with their own capabilities and in the pace that is suits them. The huge tendency towards using new technologies shown by pupils, encouraged the researcher to make use of it for the sake of improving students' self-learning abilities.

2.1.6.1 Benefits of IDV for learners

Since the concept of it is based on interactivity, the researcher as an expert teacher believes that it will be a promising tool that helps students to develop their reading comprehension and vocabulary learning. The following are some of the benefits of the IDV for learners:

2.1.6.1.1 Engagement

The process of interactivity makes videos more immersive and engaging; hence interactive videos helps learners to maintain attention for longer periods than traditional videos. (Willmot et al, 2012) believes that IDV can inspire and engage students when incorporated into student-centered learning activities through:

- Increased student motivation.
- Enhanced learning experience.
- Higher marks.

- Development potential for deeper learning of the subject development potential for deeper learning of the subject development potential for deeper learning of the subject.
- Development of learner autonomy.
- Enhanced team working and communication skills.
- A source of evidence relating to skills for interviews.
- Learning resources for future cohorts to use.

2.1.6.1.2 Discovery

Learning by discovery is one of the very best ways to learn. Interacting with contents included in videos that provide variety of options and branching can help facilitate this. This promotes learning and increases information retention.

2.1.6.1.3 Immersion

Moving seamlessly and smoothly by learners from one video to another ensure that there won't be breaks or interruptions in the narrative. This provides a much higher degree of immersion and emotional engagement for the viewer.

2.1.6.1.4 Adaptation

Decision points provided in the video timeline give learners the opportunity to adapt the training to individual viewers. Learners can decide what they want to learn or what they want to branch. Logic could be added to analyze decisions and adapt the delivery of content accordingly.

2.1.6.1.5 Self confidence

The chance to learn what to want and when to want, provides learners a great amount of self-confidence. Students get such feeling since they are not going to be threatened of punishment for their wrong answers any more.

2.1.6.1.6 Easy to access anytime

With IDV, learners can learn anywhere from their mobile devices: laptops, tablets or smartphones.

2.1.6.1.7 Learning at an individual pace

Every teacher knows that each student has his own pace of learning. With IDV, all students can learn at their own individual pace.

2.1.6.1.8 Opportunity for self-study

in interactive video, learners can refer to more useful materials and resources for self-study.

2.1.6.1.9 Chance for self-testing

IDV provides learners a great chance to test themselves and to have a great feedback through passing quizzes and answering activities.

The researcher believes that Palestinian students are in real need for such media which engage them in the learning process as an active element. He noticed that students really enjoy any teaching method that provide them any level of interactivity. The endless benefits of this technique can facilitate learning English for Palestine curriculum as it matches with students' needs and provides them a great chance to interact with the provided content.

2.1.6.2 Benefits of IDV for teachers

Honey & Moeller (1990) differentiated between teachers who do and do not use technology. They pointed that "Teachers with a high level of technology implementation were fairly similar, and tended to concentrate on instilling a sense of curiosity and desire to learn in their students. They reduced the amount of time spent on content and devoted more time to an inquiry-base approach which helped students develop critical thinking. These teachers use technology within a process-oriented approach to enable students to reach well defined curricular objectives. They believed that allowing students to explore and to use computer applications resulted in increased learning since the students enjoyed finding creative ways to master the curricular objectives. In other words, those teachers who are more likely to use scientific inquiry in their classes are the same teachers who are more likely to use technology in their classes."

There are many benefits to using video in education as shown in several decades of research. Khan (2011) in "Let's use video to reinvent education" describes the transformative way video can impact on teaching and learning and encourages teachers to consider the flipped classroom model where learners can digest lecture content at their pace and explore content more deeply during class time.

The followings are some benefits of IDV for teachers indicated by the researcher:

1. It provides opportunities for self-development in the field of teaching methods.
2. It provides opportunities for being more innovative.
3. It contributes on finding new types of interaction between teachers and learners, and learners and content.
4. It saves time and effort.

5. It develops teacher's ability to be facilitator, guidance and controller instead of being restricted to direct teaching.

The researcher indicates that IDV can benefit teachers in many fields concerning time, effort and learning outcomes. He believes that the levels of interactivity provided by IDV help the teacher to have extra time to concentrate in new elements in the teaching process that results in better learning outcomes. He assumes that IDV save effort since they turn the role of the teacher from being lecturer into controller or facilitator. Being engaged in the learning process is a common dilemma learners suffer from in Palestinian schools. The opportunities provided by IDV for learners to be interactively engaged in the learning process was the main motivator for the researcher to adopt it.

2.1.6.3 Benefits of IDV for reading comprehension

Underwood & Pearson,(2004) indicate, "An unfortunate fact is that most of learners and readers in our schools routinely struggle and find difficulties when it comes to comprehending their academic reading assignments. Hence learners move through the many grade levels, they must process information from increasingly more complex texts; at some point, the knowledge acquisition task posed by these texts reaches the point at which getting the words right and reading with greater facility and expression just does not seem to be sufficient."

Soalt (2005) indicates that, activating students' background knowledge is fundamental before starting to read new texts. Teachers should find a way to build or trigger such knowledge for those students who find topics unfamiliar to them.

Coté, Goldman, and Saul (1998) suggestes that children in comprehension and learning situations, often have little amounts of prior knowledge about the content of the texts they read. One way to assist students in developing or activating background information is through components of IDV. Andreasen (2009) states that, IDV essence is about facilitating children's understanding of complex text which supply a dynamic visual support mechanism. IDV play an important role in assisting readers who lack the minimum background knowledge to enhance and reach comprehension, especially among children who are at-risk with respect to literacy skills.

IDV can be a powerful tool for engaging older struggling readers in active comprehension processing, and it can be used as a starting point for in-depth comprehension and writing activities.

According to Kinzer, Gabella, & Rieth (1994), "Video-based anchors also allow teachers to provide instruction that is more inclusive because the use of video bypasses the text, thereby enabling students with or without disabilities to have increased access to content. Thus, no successful readers can be active participants in the learning process, thereby enhancing their motivation to participate in academic activities".

The researcher anticipates that, IDV can provide information in a rich context that students find it easy to acquire the necessary background knowledge. IDV can also be considered as a vehicle to increase background knowledge for struggling middle level students. interactivity concept combined in IDV guarantee an effective reading comprehension for all users. The options provided in the researcher's IDV helps students to comprehend at their own pace according to their abilities, these options includes hints about the topics and texts. it emphasizes on different reading skills which leads to well-text comprehension. Viewers can stop at any point while reading the text till they get the point. They can also listen to the text as much as needed and can also repeat the whole text.

2.1.6.4 Benefits of IDV for vocabulary learning

Vocabulary is the foundation of any language, without which effective communication is very unlikely. However, it is also one of the most difficult parts of learning a new language, especially when it is foreign. Fortunately, with the help of emerging technologies like the interactive video, it is now far easier to learn vocabulary in innovative ways.

The principle known as the "multimedia principle" states, "people learn more deeply from words and pictures than from words alone" (Mayer, 2005). Authentic videos put language into an extremely authentic context, especially when backed-up by proper follow-up activities. Watching videos, language learners witness language in action. It is especially useful in EFL situations where learners rarely have the opportunity to use their L2 for real purposes. Videos are also a great source to boost learners' pronunciation, stress and intonation patterns, all of which can help to better learn words.

Washang(2013) states, enriched with contextual clues, videos are able to easily trigger the background knowledge of the learners, which in turn, puts learners in a much stronger position to analyze the situation. Now that the relevant script and schema are functioning, learners may be better listeners, participants and intelligent guessers of the

missed words. The other indisputable advantage of videos is that they build up motivation in the learners especially when selected properly in accordance with the age and interest of the learners.

By using IDV, teachers can formulate the lesson beforehand, and include specific learning tasks like labeling the parts of a picture, matching words with their meanings, etc. Also, it is easier for the students to understand the tasks when they are displayed right in front of them previously. Zhu (2012) focuses on the diversity feature of videos. Video appeals to different senses via sound, image, color and shape at the same time.

The interactive video also allows the use of visual content like pictures, graphics and videos. Students can memorize the vocabulary easily when they see a picture that depicts the meaning of a word. Using a funny and interesting picture works best for this purpose.

Moreover, instead of just trying to memorize the words and their meanings, students can be directed to find out the meaning of different words on their own using the hints given, and the various tools of the interactive video. For example, they can be shown a picture and a set of different words (unknown to them), and asked to label the parts of the picture using those words. Such activities improve the students' autonomous skills and the vocabulary learned is retained better.

It's been widely found that students know the meaning of a word but can't pronounce it. IDV provide students the correct pronunciation of words. IDV also provides users an opportunity to revise the previously learned vocabulary. In addition, it helps the students to create their own visual dictionary. They can refer to it anytime whenever they need.

In fact, learners consider learning vocabulary as a boring and difficult part. For such reason students lose interest, which in turn leads to learning difficulties. IDV makes learning vocabulary more interesting by the use of variety of exercises and tasks. Therefore, the students minds engage better, the learning process becomes easier and the learning outcomes gives better results.

The above mentioned advantages reveals that using IDV in classrooms is a very effective way of teaching and learning vocabulary. The researcher provided his students in the experimental group many useful options that they will surely prefer. When entering to the vocabulary part student can listen to the new vocabulary in a British accent. Each word is presented with a related picture which eases its meaning

understanding. Students can repeat each word and listen to it as needed. After that student can either go to a game in which two picture arises and students have choose one of them according to the word they hear, or they can go to a quiz related to the new presented vocabulary.

2.1.7 Features

In this part, the researcher enumerates some of the features of his IDV as follows:

2.1.7.1 Buttons and menus

The designer can add buttons and menus into a video to provide users the option of navigating to different related materials such as new video learning module, video clips, or linking to external sites or content. The designer can add these buttons on different places of the video while it is running—thereby offering the viewer options for a specific time slot - to link to related content only when it is relevant. The researcher provided his users a menu that includes three buttons. The first leads the clicker to vocabulary section, the second for reading texts and the third for quizzes. After moving to one of the previous mentioned buttons the user will find new buttons and menus which help him to navigate through the whole video content. (see figure 2.1)

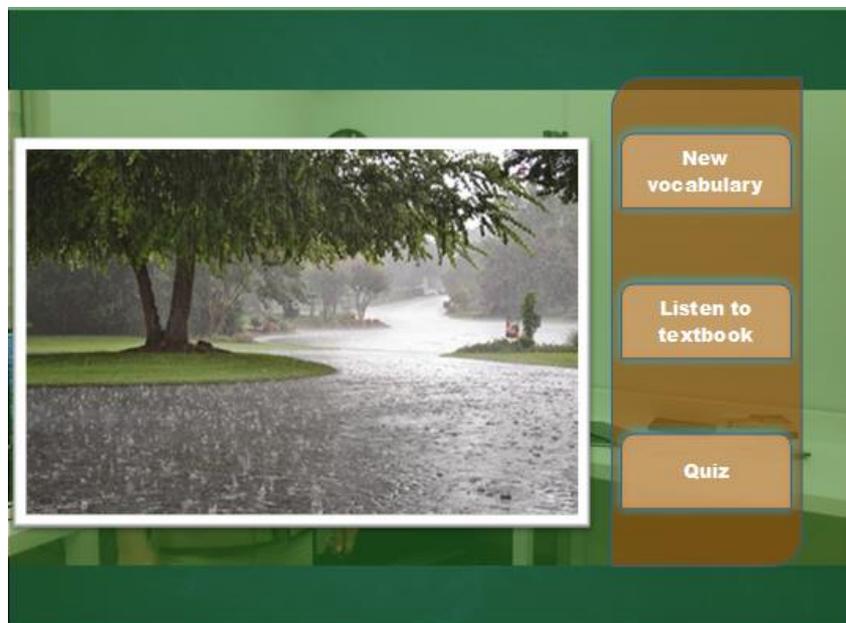


Figure (2.2) IDV face, buttons and triggers.

2.1.7.2 Transparent hotspots

Transparent hotspots can be added on any part of the video that can link to other component or content without leaving the video environment and branching to other

videos. With transparent hotspots designers tap areas of the video image they are interested in and this lets learners interact with objects on the screen. Buttons separate the user from the content because they draw the viewer outside of it. Hotspots more effectively connect the user to the video content.

The researcher used tens of hotspots in his IDV. He made use of it to help student have a feedback and to have a formative evaluation. When clicking on hotspots learners will receive a sign whether they are correct or not. Clicking on the right place will lead them to continue watching. Hotspots can be also used to provide students important information or hints

2.1.7.3 Video navigation controls

Usability and ease-of-navigation are important elements for IDV learning content to be adopted by users. With hotspots on the video and (next-previous) buttons, it is possible for learners to create video navigation in which the viewer can scrub quickly forwards or backwards through a video module. Such controls includes next and previous buttons, replay, close and hide. See figure (2.2)



Figure (2.3) IDV navigation controls.

2.1.7.4 In-video forms and text entry

Interactive video allows text entry fields to be overlaid on the video screen. At any point you can ask the user to input text. The advantage of having this on the screen is that any call to action can be immediate—no exiting the video and clicking a link to get to a page with an entry form. The information input could be used to customize the experience or alter the sequence of videos or other content delivered to the viewer. See figure (2.3)



Figure (2.4) IDV text entry sample .

2.1.7.5 Indicative useful hints

Through IDV, users can receive many hints that reinforce learners prior knowledge about the content and leads them to better understanding of the presented content . It also leads them to well progress when answering coming activities. See figure (2.4)

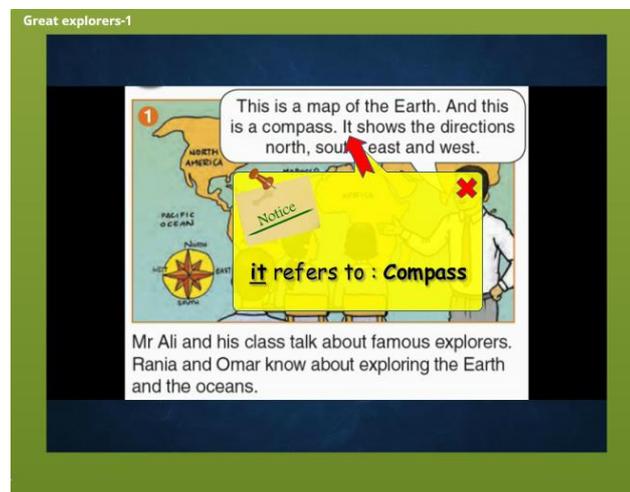


Figure (2.5) IDV hints.

2.1.7.6 Variety of evaluation activities

An amazing feature of IDV is its great possibility of offering variety of activities that guarantee user interactivity. Such feature will never lead the learner to be bored. Tens of different activities can be presented in an enjoyable way including: multiple choices, true and false, multiple response, matching, hold and drop and fill in the blank. See figure (2.5)



Figure (2.6) IDV different evaluation forms.

2.1.8 Recommendations for IDV preparation

1. Keep videos brief and targeted on learning goals.
2. Use audio and visual elements to convey appropriate parts of an explanation; make them complementary rather than redundant.
3. Use signaling to highlight important ideas or concepts.
4. Use a conversational, enthusiastic style to enhance engagement.
5. Embed videos in a context of active learning by using guiding questions, interactive elements, or associated homework assignments.

2.1.9 Barriers of using IDV in the Classroom

The barriers to using IDV in the classroom can be summarized as follows:

- 1- Both teachers and students must be computer-literate because using IDV requires good abilities at computers in order for a user to give commands to a computer and respond to it.
- 2- Preparing videos takes much of time and effort.

- 3- Preparing IDV requires experts in designing and programming.
- 4- IDV requires high-cost software.
- 5- In addition to all the aforementioned barriers, Gaza has a special problem which is electricity.

2.1.10. Commentary

The purpose of this study is teaching English vocabulary and reading skills through IDV. Learning through IDV can be considered as an alternative options and very useful way of English learning. Teachers should take using IDV into account because new technologies are preferable for their students rather than traditional ones. In fact, brilliant teachers are those who always look for what their students prefer. The opportunities provided by IDV should encourage teachers to adopt this technique as a an effective teaching style. To sum up, IDV will never replace the role of teachers, but it will make learning English more enjoyable and useful.

Part 2 Reading comprehension

Reading is a complex process that includes many components and different sub-processes. It comprises interaction between knowledge, language word recognition, reading strategies and many other cognitive processes and components. Reading can also be considered as a means of language acquisition, communication, and sharing ideas and information. However, reading is meaningless if not associated with comprehension.

Pardo (2004) states “comprehension is a complex process that has been understood and explained in a number of ways. The RAND Reading Study Group (2002) stated that “Comprehension is the process of simultaneously extracting and constructing meaning through interaction and involvement with written language”.

Comprehension is a multifaceted creative process that depends on four major skills: semantics, phonology, pragmatics and syntax (Tompkins, 2011, p.37).

According to (Yale, 2014, p.1):

"If students read without comprehension, then they are doing nothing more than following symbols written on the books with their eyes and producing those symbols' sounds out. Thus, reading comprehension is an important basic pillar of the act of reading. When a student reads a text, he engages himself in a complex system of cognitive processes".

In fact, decoding or sounding out words is part of the reading process but can't be considered as real reading. If students don't understand what they are reading, they're not then really reading. Reading without comprehension is nothing more than parroting. If students couldn't unlock meaning while reading, the words directly become boring babble and students will never enjoy what they read.

2.2.1. Reading in Islam

Muslims cannot deny the importance of reading, especially when the first word revealed to our Prophet Muhammad (peace be upon him) was “**Read!**” .

The imperative verb “Read” was the first word revealed in the Quran and is repeated twice in the initial few verses. Considering that the Quran, according to Muslims, is the last and final revelation to humankind, the first command points to the centrality of reading as a foundation and the path to approaching, connecting, knowing and understanding the divine. (Bazian, 2015)

“The Book” is one of the names for the Quran, which if understood in relations to the first revelation, the imperative verb “read” should produce the key epistemological base for Islam and Muslims – a divinely rooted command for the acquisition, preservation and transmission of all knowledge. The book is the source, a primary locus for preservation of knowledge and a tool for constant expanding of human horizons that can materialize through engagement in the act of reading.

Islam places great importance on reading and education, and the holy Quran is the heavenly source that confirms its importance. The first verses of Quran that were revealed to Prophet Muhammad, blessings and peace be upon him, stressed this very real need for reading. The starting of Al-Alaq Surah included a straight order to prophet Mohammed to read.

In addition, Prophet Muhammad (upon him be peace) encouraged his followers (Al Sahabah) to travel to any place on the earth, even to china seeking for knowledge. (Bukhari).

Reading the Qur’an is too important and significant for Muslims. However, reading the Qur’an is meaningless if not combined with understanding the significance of every single word and practicing what is being read. As Muslims we've been told that the more we read Qur'an and the more we apply it in our lifetime, the more we get high ranking in Paradise. Allah says, “Those who recite the Book of Allah, and establish the prayer, and spend of that which We have bestowed on them secretly and openly, they look forward to imperishable gain, that He will pay them their wages and increase them of His grace. Lo! He is Forgiving, Responsive.” (Fatir, p.29-30) .

History also proves that Muslims were leaders in reading and writing books. Muslims wrote about different subject including science, art, literature, music, medicine and religion. Thousands of Muslim books were dominant for ages. Al Qanoon (The Canon of Medicine), for instance, was considered as an encyclopedia of medicine, doctors used it for hundreds of years. Such accomplishments gives indications about how much reading is important for Muslims.

2.2.2. Reading comprehension definition

Reading comprehension can be defined as the process of constructing meaning from text. The goal, therefore, is to build a whole understanding of what is written in the text rather than to construct meaning from isolated words.

As described by many experts, comprehension is a complex process that has been explained and understood in many ways. The RAND Reading Study Group (2002) stated that "comprehension is the process of simultaneously extracting and constructing meaning through interaction and involvement with written language" (p.11). Duke (2003) added "navigation and critique to her definition because she believed that readers actually move through the text, finding their way, evaluating the accuracy of the text to see if it fits their personal agenda, and finally arriving at a self-selected location".

A common definition widely used by teachers indicates that comprehension is the process of constructing meaning by interacting with text through the combination of many elements include information in the text, prior knowledge and previous experience.

Millrood (2001) defines reading as a combination of cognitive and visual process to extract meaning from a content by understanding the text, processing information, and relating it to existing experience.

Hodges (1995, p.207) defines reading comprehension as an purposive thinking in which meaning is built in through interactions between the reader and the text. According to Bolain (2008, p.2), "reading is defined as a subtle and complex process that involves sensation, perception, comprehension, application and integration. He also states that it is the magic key to the world of enlightenment and enjoyment and is the basic tool for learning in all the subject areas."

Abdal Rahim (2015) states, "Most researchers define reading comprehension as an interaction process between the reader and the text. This means that reading is not a passive process, but an interactive process that requires readers to harmonize their previous knowledge with the information in the text, analyze information, assimilate it to achieve understanding and draw a mental image of the message that an author wants to convey."

2.2.3. Meaning and Comprehension

Reading comprehension (understanding, gaining meaning and interpreting the text) depends on a variety of reader-related, text-related, and situational factors (De Corte et al. 2001). Meaning is formed in the reader's head, that is, a person's prior knowledge affects the kinds of meanings constructed from the text information (Fukkink and de Glopper 1998; Lipson 1983). From this perspective an individual's existing knowledge is a major determinant in acquiring new information (Ausubel 1968; Cain and Oakhill 1999; Griffin et al. 1995). Furthermore, the reader's comprehension of the text is considered to be linked to the reader's ability to construct hypotheses, rules, schemas, and mental models (Vipond 1980).

2.2.4. The importance of reading

Nowadays, learners receive a lot of information through televisions, radios, and different multimedia resources. However, none of the mentioned avenues is able to educate as the fundamental skill of reading can do. (Harris, 2007, p.1). Thus, reading is a basic language skill that any learner needs. In other words, it is one of the most important language skills. It is the barrier between one's being literate or illiterate. (Gu, 2003, p.6) states that reading helps students to navigate through the target language and gain valuable linguistic input to build up language proficiency. Moreover, reading reinforces students' other language skills. Abu Shamla (2010, p.15) states that reading is a crucial skill that helps students to acquire knowledge. It increases students' ability to concentrate and develops critical thinking. In addition, it increases positive feelings, pleasure and effectiveness. Badr El-Deen (2009, p.33) indicates that reading is an essential skill for English language learners as it helps them progress in other academic areas.

2.2.5. The importance of reading comprehension

Reading develops only with practice. Many aspects of reading, such as word recognition and fluency, can be learned through time. Such aspects are considered as basics of reading and must be mastered. However, reading comprehension should be emphasized in this process. Students can read words and text on their books as parrots but if they couldn't comprehend they will not be able to predict what will happen next, gain information, illustrate events, monitor their understanding of content, sequence or

characters, clarify confusing parts of the text, or connect what they're reading to their own experience or prior knowledge. And that is what true comprehension is all about.

One of the most dangerous and widely interspersed dilemmas among Classrooms across the world which causes the same type of frustration that students don't possess adequate **reading comprehension** skills to do what is expected of them. Without comprehension, reading is nothing but tracking words on a page from left side to right side while sounding them out. People used to read for many different reasons, the dominant goal is to gain some understanding of what the author is trying to convey and make use of that content – whether for learning a new skill, fact gathering, or for pleasure. That's why reading comprehension skills are so important. Without them the reader cannot gather any information and use it to efficiently function and enjoy the richness of life.

According to the researcher, reading without comprehension is similar to digging in desert! He believes that, without comprehension the goals and objectives of the reading lessons are impossible to be achieved. Reading without comprehension leads students to feel bored and construct a feeling of being lost. The researcher believes that reading comprehension is a key for success and a prior demand for the progress in other fields in the learning process.

2.2.6. How comprehension works

Comprehension happens while transacting between the text and the reader (Kucer, 2001; Rosenblatt, 1978). The reader collects information and brings them to the literacy event, each text has its certain features, the engagement of the reader with the text at a particular moment leads for meaning emergent .

According to RAND Reading Study Group (RRSG,2002), "Reading comprehension is of three components: the *text*, the *reader* and the *activity* of reading. The RRSG developed a heuristic to show how these components interact and interrelate in reading comprehension. This three-way interrelationship occurs within a larger sociocultural context that shapes and is shaped by the reader and that interacts with each of the elements iteratively throughout the process of reading". (see figure2.6).

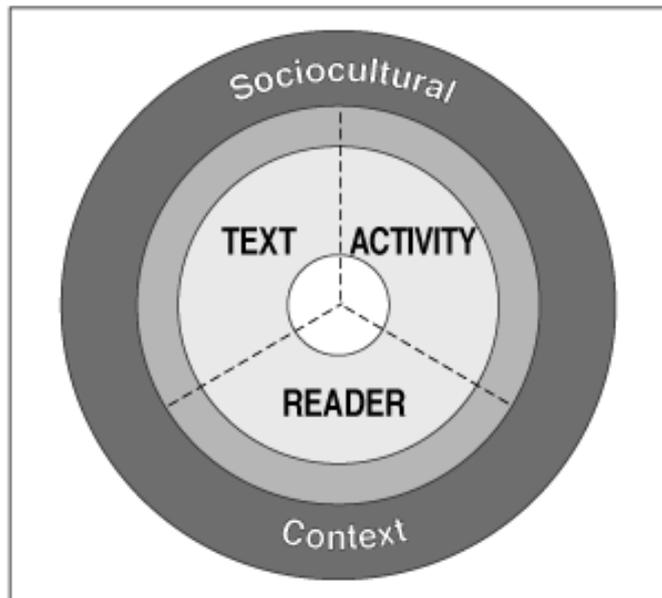


Figure (2.6) A Heuristic for Thinking About Reading Comprehension.
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2.2.6.1. The Reader

In this part of the heuristic, readers bring to the act of reading his 1) **Cognitive capabilities** which include many elements such as memory, attention, critical analytic ability, visualization and the process of inferring; 2) **Knowledge** which include linguistic and discourse knowledge, knowledge of comprehension strategies and vocabulary and topic knowledge; 3) **Motivation** which includes interest in the content, purpose for reading and self-efficacy; and 4) **experiences**.

2.2.6.2. The Text

Any written text has its own features which impact on comprehension. Readers construct different representations of the provided text that are important for comprehension. Such representations include 1) **The surface code** which means the exact wording of the text, 2) **The text base** (idea units representing the meaning of the text), and 3) **The mental models** (the way in which information is processed for meaning) that are embedded in the text.

2.2.6.3. The Activity

The reading activity includes one or more purposes or tasks, some operations to process the text, and the outcomes of performing the activity, all of which occur within some specific context. Processing the text involves decoding the text, some higher-level linguistic and semantic processing, and self-monitoring for comprehension—all of which depend on the reader's capabilities as well as on the various features of the text. Each element of text processing has varying degrees of importance depending on the type of reading being done, such as skimming (getting just the gist of the text) or studying (reading the text with the intent of retaining the information for a period of time). Finally, the outcomes of reading are part of the activity. The outcomes can include an increase in knowledge, a solution to some real-world problem, and/or engagement with the text. The long-term outcomes of reading—improved reading comprehension ability, increased knowledge, and engagement with the text—are of the greatest direct relevance to educators.

2.2.6.4. The Context

When one thinks of the context in which reading is taught, the first thing that comes to mind is the classroom setting. But the learning process for reading takes place within a context that extends far beyond the classroom. In fact, differences among readers can, to some extent, be traced to the varying sociocultural environments within which children live and learn to read. Learning and literacy are viewed partly as cultural activities, not just because they are acquired through social interactions but also because they are an indication of how a specific cultural group or discourse community interprets the world and transmits information. Sociocultural differences are often correlated with group differences. Groups may be identified by income, race, ethnicity, native language, or neighborhood.

2.2.7. Factors Linked with reading

2.2.7 .1 Oral language.

Being a good listener and having the ability to participate in conversations about texts is an important first step to become a good reader. According to (Communication Trust, 2013). "Once students are able to read connected texts they need to be taught

increasingly sophisticated speaking skills so that they can meaningfully engage in discussions".

2.2.7.2. Vocabulary.

"Having knowledge of many words meaning supports comprehension because readers do not need to stop as often to seek clarification" (Beck, McKeown, & Kucan, 2013). Many research indicates that there is a strong relation and correlation between vocabulary and reading. This relationship is reciprocal which means that the increment in on side leads to incensement on the other one. Reading helps learners widely to access to new words while knowing new words ease the reading and makes it more enjoyable. "It is highly likely that students who do not have an increasing vocabulary will find that curriculum demands outstrip their capacity to process what is expected to be read and understood (Newkirk, 2013/2014)".

2.2.7.3. Letter-sound and word knowledge.

"Secure decoding and high-frequency sight word knowledge takes away processing demands at the letter and word level so readers are free to focus on meaning (Caldwell & Leslie, 2013)".

2.2.7.4. Fluency.

"The ability to automatically and successfully name words (accuracy), read using a smooth and flowing style (rate), and with attention to phrasing, intonation, stress and punctuation (prosody) is indicative that students are reading with understanding (Hasbrouck & Tindal 2006)".

2.2.8. Factors that influence comprehension development

2.2.8.1 Teaching strategies

(Nadera,2001) states "Success in reading comprehension is not an inborn capacity and it can be learnt". Thus, to help reader learn how to read successfully, an effective variable conditioning the reading process have to be taken into consideration. i.e. reading strategies. As indicated in many studies, reading strategies are vital element since it influences readers' success. In fact, Unsuccessful readers depends on too few strategies, or apply them incorrectly which clearly impairs reading.

There are variety of reading strategies, but they are all built on the same basic assumptions. Firstly, before reading, readers should think wisely about the purpose for which he is going to read the text. Secondly, readers should take a look at some

elements within the text such as: the title, headings, pictures, or any effectiveness other visual cues accompanying the text. Thirdly, readers should read the introduction and conclusion of the text, or to skim paragraphs and read its first lines, and only then the whole text. Fourthly, readers should scan the whole text to look for the most important points to focus on during detailed reading. Fifthly, readers should write down some notes as they read. Sixthly, when the readers face problems with understanding a piece of the text, they should stop and reread it till reaching understanding. Seventhly, long texts must be divided into small pieces, to ensure readers focus on goals. Finally, readers should give answers to the questions concerning the contents of the text. "After the reading has been completed, the text should be considered in three ways. The reader should think about the basic information provided on the printed page, and then he should draw additional information from between the lines, and finally, ponder on the meaning of the text referring it to his own experience (King, 1999)."

The researcher indicates that, teachers should provide their students variety of strategies in the early stages at school and should train them how to use them appropriately. He believes that both teachers and learners shouldn't be restricted to one strategy, since there isn't an ideal strategy that fits all reading texts.

2.2.8.2 Working Memory

Researchers defined Working memory as the ability to keep or store information provisionally or temporarily while manipulating knowledge and information needed to complete certain complex tasks (cognitive ones) such as reasoning, learning and comprehending. Swanson, Zheng, and Jerman (2009) explain that learners performing working memory complex tasks must save and remember some parts of the required tasks while other tasks are ignored or inhibited, as they complete task-related processes.

2.2.8.3 Vocabulary

All studies and researches agreed upon that knowledge of word or vocabulary knowledge in addition to meanings and functions, plays a crucial role in reading comprehension. Abidin, Mohammadi & Alzwari (2012, p. 23) claims that "To comprehend any written text, readers should distinguish the meanings of all vocabs or words they encounter".

Vocabulary size and depth are effective elements that affect Comprehension. The last is affected when students do not have a rich vocabulary because they lost the ability to

apply word knowledge to the current context. Chao (2005, p.44) states that "There is a strong correlation between vocabs and reading comprehension ability. In fact, background knowledge and vocabulary knowledge can clearly help learners read and comprehend better". The more vocabulary learners know, the better they can understand and decode what they are reading. Word knowledge helps learners in decoding efficiently , which is an important part of reading (Qian, 1998).

As an English teacher, the researcher noticed that students who lack word knowledge or have poor vocabulary show insignificant progress in reading comprehension in specific and in the learning English in general. In contrast, he noticed that student with rich vocabulary knowledge show great tendency towards learning English and are comprehending faster and better.

2.2.8.4 Prior Knowledge

There is no doubt that Prior knowledge about topics and contents develops and improves both memory and comprehension. (Priebe, Keenan, & Miller, 2012) defined Prior knowledge as "Content knowledge or domain that has been ascribed to increased reading comprehension and the memory of what has been read. Research support that the effects of prior knowledge are so important and significant. Such knowledge ease the comprehension process since it provide a prior conception or image about what readers are going to read. "The aim of one reading program is to increase students' core knowledge because it is believed to be strongly correlated to reading comprehension" (Hirsch, 2006).

The researcher indicates that there is a correlation between prior domain knowledge and word recognition. Prior knowledge leads to reading comprehension incensement because learners' understanding of topics aid in word identification.

Williams (1984, p.11) indicates that "Background knowledge is a significant facilitator for comprehension. He asserts that students with poor background knowledge may struggle to access, participate, and progress throughout any curriculum.

The researcher believes that those teacher who help their students to build and activate prior or background knowledge may facilitate their students' literacy success" and may leads them to make successful inferences.

2.2.8.5 Word Recognition

Word recognition is correlated to both prior knowledge and reading comprehension. When students move from elementary school, focus becomes more stronger on enabling them to comprehend text. The more the students can identify words the more they comprehend. Gilbert et al. (2013) indicates that, students with poor morphological awareness won't be able to read efficiently, which affects reading comprehension.

2.2.8.6 Intention.

Teachers should always inform their students why they are reading texts and what they will be asked to do after they have read it. Students should know the purpose of reading a text and should also know what are the following requirements after reading.

2.2.8.7 Text types.

Learners should be taught comprehension strategies and how to apply them when reading both fiction and non-fiction as text types place different demands on readers. (Hammond & Nessel, 2011; Opitz, Rubin, & Erikson, 2011).

Yopp & Yopp (2006, p.37) indicates that "There should be much more focus on reading non-fiction texts because they provide answers to learners' questions about their real world and build background knowledge crucial to text comprehension."

2.2.8.8Text layout.

According to (RAND Reading Study Group, 2002). "Print and digital texts can place varying demands on readers and there is no guarantee that students will move seamlessly across these demands without explicit instruction as to how to manage features unique to texts, for example, immediate access to dictionary meanings when reading e-books can be an asset if meanings can be understood."

2.2.8.9 Metacognition.

Some students do not monitor themselves while reading, may read words continuously without pausing to think whether they understand. If this continues, these students will give up and feel lost because they don't 'get it'. Predictably there are variety of readers in any classroom, some of them realize when they have stopped understanding and can

successfully solve and deal with such problem. Also, there are other readers who don't understand that they are meant to comprehend what is being read (Fisher & Frey, 2012; Ford & Opitz, 2011; Kelley & Clausen-Grace, 2007). Afflerbach, Cho, Kim, Crassas, & Doyle, (2013, p.440) pointed that "successful learners or readers are metacognitive. They have plans while reading in relation to specific goals, and they monitor and evaluate their reading as it progresses."

2.2.8.10 Reading texts at students' cognitive level.

Landrigan & Mulligan (n. d.) indicate that reading texts should suit readers' cognitive level. Although, Students may utter most of the words in some texts, however this does not mean that they understand them. The difficulty of certain texts, although seems engaging sometimes, affect reading comprehension negatively.

2.2.8.11 Oral and silent reading.

Hiebert, Samuels, & Rasinski (2012) remind teachers that "when students orally read they most often have scaffolded support from a listener but when reading silently they are on their own, meaning that they need to have the stamina to stay with the task and be able to self-monitor their comprehension." In fact, when replicating and endorsing the efficacy of prior research Prior, Fenwick, Saunders, Ouellette, O'Quinn, & Harvey (2011, p. 189) found that "an oral reading advantage for comprehension was found for students in first through fifth grades" and that while grade six was a transitional phase it was only in grade seven that silent reading afforded more assured comprehension. They go on to recommend that silent reading should not be the sole practice in middle and upper primary classrooms".

2.2.8.12 Motivation

Grabe and Stoller (2002) indicate that reading motivation is very significant for readers since it increases their reading comprehension. It is the shortest way to help students understand texts easily and effectively. Therefore, English learners are in need to improve their reading motivation to gain better understanding of written texts. Seymour and Walsh (2006) state, Motivation is a significant domain which affects learners' reading comprehension. However, many teachers do not know its great importance in reading comprehension.

Pachtman and Wilson (2006) stated that "it is vital to motivate learners to read by giving them opportunities to select their interest materials. In other words, readers want to read more when they are permitted to select their reading materials because they must discover that reading is a pleasurable activity."

The researcher believes that when learners are becoming well-motivated, they will directly comprehend what is being read and they will try to engage themselves in more complex challenges.

2.2.9. Characteristics of good readers

In her research, "Understanding the Reading Process", (Konza,2010) determined the Characteristics of good readers as follows:

2.2.9.1 Understand the purpose of their reading

Good readers are those who can understand all that they read, and are able to skim and scan to gain certain information, details and ideas. In fact, if students understand the purpose of what they are reading they will then be able to choose a suitable reading strategy for maximum effectiveness.

2.2.9.2 Understand the purpose of the text

Brilliant readers can quickly construct awareness about author's purpose of the text. Texts are of many types in accordance to purpose, they can be written to inform, entertain, persuade, advertise ..etc. Being aware of these assists the development of the mature and critical reader.

2.2.9.3 Monitor their comprehension

Good readers are able to monitor their comprehension as it assists them to integrate what they are reading with their previously existing knowledge; monitor their predictions; differentiate major content from detail; evaluate content; and focus on the relevant parts of the text.

2.2.9.4 Adjust their reading strategies

When readers monitor their comprehension, they became able to select their reading strategies. They may repeat reading if something is confusing; read slowly if sentences are long or complex; or use decoding strategies combined with their word knowledge if they face an unknown word among a range of other strategies.

2.2.10. Ways towards reading comprehension

Reading is the greatest single effort that the human mind undertakes, and one must do it as a child. ~John Steinbeck

On their book, "7 Keys to Comprehension: How to Help Your Kids Read It and Get It!", (Zimmerman, Hutchins, 2003) states,

"For your child to become a great reader, his/her mind needs similar watering [to bamboo]. You water your child with words-- talking and reading. It doesn't take a lot of time, but you must never forget to water, a little bit every day, week after week, year after year." (p. 2)

The two authors indicate that, Good readers use the following 7 Keys to unlock meaning:

1. **Create mental images:** Brilliant readers are able to construct a wide range of images (auditory, visual and other sensory) while reading. They can involve themselves emotionally with what they read.
2. **Use background knowledge:** Good readers can evocate relevant prior knowledge to enhance their understanding of what they're reading.
3. **Ask questions:** Good readers are able to creat questions before, during, and after reading to make predictions, identify meaning and focus their attention on what's important.
4. **Make inferences:** Good readers connect what they read with their prior knowledge to make predictions, find answers to questions, create interpretations and draw conclusions that deepen their understanding of the text.
5. **Determine the most important ideas or themes:** Good readers can determine and identify key ideas while reading, and they can distinguish between important and unimportant information.
6. **Synthesize information:** Good readers collect, analyze and process information while reading to get the overall meaning.
7. **Use fix up strategies:** Good readers can determine whether they understand or not. If they have trouble with understanding certain words, phrases, or longer passages, they tend to use suitable problem-solving strategies including, using a dictionary, asking questions, rereading, skipping ahead and reading the passage aloud.

2.2.11. Reading process

Reading is a language-based skill. As such, it requires the processing of language that is decontextualized from any ongoing event. Decontextualized language is characterized by the fact that the speaker and listener do not directly share the experience being communicated. The speaker must create the context through language, as in narration. It is not surprising, therefore, that poor readers also exhibit poor narrative skills, especially with linguistic cohesion (Norris & Bruning, 1988). "The narratives of poor readers tend to be shorter and less well developed than those of better readers. Reading is the synthesis of a complex network of perceptual and cognitive acts along a continuum from word recognition and decoding skills to comprehension and integration. Beyond the printed page, a skilled reader draws conclusions and inferences from what he or she reads. Of all the factors involved in early reading success, early exposure to reading by parents and a literate atmosphere at home seem to be most important. Several steps are involved in reading and reading comprehension. Both oral language and the written context play a role in word recognition and in the ability to construct meaning from print" (Gillam & Gorman, 2004). "Comprehension emerges from the interaction of letter, sound, word meaning, grammatical and contextual processes, and a reader's prior knowledge. The first step is decoding the print, which consists of breaking a word into its component sounds and then blending them together to form a recognizable word. Words are then interpreted based on grammar, word meanings, and context. There is an interaction between the print of the page and linguistic and conceptual information brought to the task by a child" (Whitehurst & Lonigan, 2001). "While phonological skills are essential for decoding, other areas of language—syntax, morphology, semantics, and pragmatics—are needed for comprehension" (Nation & Norbury, 2005). Comprehension require the active reader to be concerned with self-monitoring, semantic organization, summarization, interpretation, mental imagery, connection with prior knowledge, and metacognition of knowledge about knowledge, to name some of the skills involved.

According to Chastain (1988, p.204-205), "the reading process means an active cognitive system operating on printed material in order to comprehend the text. He states that during the writing process, the writer tries to activate background and linguistic knowledge to re-create meaning; and then the reader's task is to activate background and linguistic knowledge to recreate the writer's intended meaning."

Abdal Rahim(2015) States, "Reading is a complex, interactive process that involves features of readers, texts and tasks. In the reading process, the reader is an active participant, constructing meaning from clues found in the printed text. In other words, meaning is not inherent in texts; rather texts have the potential for meaning. Reading is also an individual process that often entails different interpretations for different readers.

2.2.12. Models of reading process

To understand what occurs when we read is an important prior demand for those who want to teach reading. Reading process involves transformation of certain text into thought or meaning. One may think that reading is just about combining letters into words, words into one sentence or more and sentences into meanings. However, researchers, psychologists and linguists, using numerous of techniques, have found that things are much more complex. The experimental findings resulted in several models of the reading process that should be put in account.

Al Hosani (2005, p.71) states that there are three cognitive processes that need to be considered to understand the reading engagement fully. These models are the bottom-up, top-down and interactive model.

2.2.12.1. The Bottom-Up Model

Bottom-up processing occurs when learners try to understand language by looking at the smallest units of the text as basics, and moves from these units to more complex ones trying to understand the whole text. However, many researchers and experts indicated that bottom-up processing is not efficient enough to approach a text initially. This view is not shared by Wallace (1992), however, who argues that bottom-up model should be used while teaching L2 learners because it provides them the probability to identify the linguistic and structural parts of the English language. Others, for example Ekwall & Shanker (1993), disagree saying that it is possible to understand every word of a text - but still not know what it is about.

2.2.12.2. The Top-Down Model

Top-down' model is the antithesis of bottom-up model. According to Nunan (1991) and Dubin and Bycina (1991), "the psycholinguistic model of reading and the top-down model are in exact concordance".

In such module, readers tend to make use of their prior knowledge about the texts or their back ground information to predict the meaning of what they are going to read. In top sown module, learners develop expectations about what they will read. Many researchers agreed that Top-down processing is an effective way of processing language.

2.2.12.3. The Interactive Model

Theorists, researchers and experts all agreed on the importance of the text and the reader in the reading process. The interaction and combination between these two elements created what's called the interactive approach. According to this approach, reading is the process of combining the information the reader brings to a text with textual information. The interactive model (Rumelhart 1977; Stanovich 1980) stresses both what is on the written page and what a reader brings to it using both top-down and bottom-up skills. It views reading is the interaction between reader and text. The overreliance on either mode of processing to the neglect of the other mode has been found to cause reading difficulties for SL learners (Carrell 1988, p. 239). The interactive models of reading assume that skills at all levels are interactively available to process and interpret the text (Grabe 1988). In this model, good readers are both good decoders and good interpreters of text, their decoding skills becoming more automatic but no less important as their reading skill develops (Eskey 1988).

2.2.13. Stages to the Reading Process

In order to efficiently achieve and improve students' reading comprehension, there are three reading stages teachers should be aware of. These stages are:

2.2.13.1. Pre-reading.

This stage seems to be as a preparation stage. The goal of this stage is to engage students in reading through variety of strategies and activities. Activities in such stage are learner-centered, they may include brainstorming, skimming, discovering and predicting.

2.2.13.2. During reading.

Helps readers to monitor their understanding or comprehension while reading (Afflerbach, Cho, Kim, Crassas, & Doyle, 2013). It includes more complex activities than those of the pre reading stage. Activities here focus on checking comprehension through questions such as general understanding questions, distinguishing between general and specific ideas, true and false questions and high-order thinking questions.

2.2.13.3. After reading.

Provides student opportunities to connect between the text and their own experiences. Learners here are encouraged to discuss and analyze issues presented in the text, write responses to interesting points and summarize what they have read.

2.2.14. Reading comprehension skills

Peterson (2008, p. 1) defines a comprehension skill as "An activity that readers tend to use for the sake of learning about some features of a text such main idea or cause and effect." In order to reach well comprehension level, readers need to employ different sub-skills. The importance these sub-skills arises from their ability to differentiate between the passive and active readers. Active readers interact with the text. They are able to make predictions about what will happen next using clues presented in the text, generate questions about the main idea, the plot of the text, the message, and monitor understanding of the sequence, context, or characters (Sanders, 2001). Passive unskilled readers and active skilled ones, being the bricks when combined together, construct a beautiful house as well. Moreover , teaching such sub-skills requires: systematic steps, suitability to students' levels, authenticity of materials, responsiveness to students' needs, diversity of materials and others (Lenz, 2005, pp. 4-5).

The researcher is going to navigate through some important reading skills that is used by him.

2.2.14.1. Skimming

According to Williams (1984, p. 96), "The purpose of skimming is to move eyes quickly through the text and summarize what the text is about." Harmer (2001, p.202) defines skimming as "the ability to take in a stream of discourse and understand the gist of it without worrying too much about the details ...it means running your eyes over a text to get a quick idea of the gist of a text)". Mikulecky (1986, p.2). Moyle (1972, p. 8)

believes that skimming is the most significant sup-skill helps at locating specific information, for classification of material and for revision purposes.

The researcher indicates that skimming helps students to build an imagination about the given text. He adds that such skill fosters and speed up learners ability to extract information and improves their reading fluency at all.

2.2.14.2. Scanning

In scanning readers are expected to go deeply in the text seeking specific information, such details , words, dates, names and answers to questions. (Bielby,1999, p.155). According to Harmer (1991, p.183), "Scanning refers to students' ability to read a text for particular information they are searching for". Williams (1984, p.100) defines scanning as moving through a text in quick seeking a specific piece of information.

The researcher indicates that, scanning is a more complex skill than skimming since it requires more attention and forces student to read more carefully to reach the wanted piece of information

2.2.14.3. Inference

Inference refers to the process of using the combination of both, clues included in the text and readers' previous knowledge to Infer something that is not directly stated. It requires readers to go between lines or elicit a hidden message. It is considered as a higher order thinking skill that requires students to go through the whole mental image of the text to explicate the author's hidden message which is not stated directly or clearly. The meaning produced is subjective and personal that it may differ from one to another because each has different schemata.

In this regard, Keene and Zimmerman (1997, p.147) state that "When we read, we stretch the limits of the literal text by folding our experience and belief into the literal meaning of the text, creating a new interpretation and inference". Likewise, Harvey and Goudvis (2008, p.4) indicates that inference includes merging what you know(background knowledge) with clues included in the text to come up with some information that is not directly stated. Inferential thinking helps learners to draw conclusions, figure out unfamiliar words, , make predictions, develop interpretations, surface themes, and create mental images.

2.2.14.4. Prediction

Prediction is a skill built on expectation. Readers can expect what the text is about after reading titles, examining pictures or through following certain series of events and expecting the following ones.

Grellet (1981, p.17) indicates that, prediction refers to guessing what is coming next, through grammatical, logical and cultural clues. Harmer (2001, p.200) and Seyler (1998, p. 26-28) reported that "to predict what a book or a text is about, readers need to identify the kind of a text, the author's purpose, activate his schemata, and use some key words and phrases from the body\content of the text; and in a case of a book, to preview the title, table of content and the preface".

2.2.14.5. Recognizing reference words

To prevent the same word more than one time in a sentence or in some sentences of the same paragraph or of the same article, writers always use references. References are words that substitute for other words or phrases. They usually refer back to ideas that have already been expressed, but they can occasionally refer forward to ideas yet to be stated. Thus, in order to see the connection between items of information, we need to find the reference of the substitution word. Certain English language items have the property of reference. Which means they do not carry meaning themselves, but refer to something else for their meaning. In their research (Halim, Rasid, Anuar & Salmah,2010) states, "The ability to recognize and use cohesive ties in texts (reference words in this case) is important for achieving reading comprehension successfully".(Munby, 1978). In another study, Cohen and Fine (1978) indicated that non-native adult speakers of English failed to comprehend expository texts mostly because they were unable to recognize and use cohesive ties in texts properly for integrating textual information. Nunan (1993) claimed that identifying the relationship between sentences helps students to comprehend academic reading materials successfully.

2.2.14.6. Guessing meaning from context

Contextual guessing is defined as an important strategy in the absence of dictionaries or human assistance and it "entails guessing the meaning of target word based on interpretation of its immediate context with or without reference to knowledge of the world" (Haastrup, 1989 in Parel, 2004, p.848).

Context may provide different kinds of clues to make guessing process easier for readers. For instance, context may supply partial clues that enable language learners to arrive at a general meaning. (Fraser, 1999; Harley and Hart, 2000). indicates, guessing word meaning from context (lexical inferencing) is a compensation strategy for L1 and L2 reading comprehension". (Bialystok, 1983 in Soria, 2001) adds "it involves making informed guesses as to the meaning of a word in the light of all available linguistic cues in combinations with the learner' s general knowledge of the world, her awareness of context and her relevant linguistic knowledge" (Haastrup, 1991, p.40). Research indicates that contextual guessing is one of the most favoured strategies (Paribakht & Wesche, 1999; Harley & Hart, 2000).

2.2.15. English for Palestine curriculum

English for Palestine, is the name of the Palestinian English language books (English curriculum). It's a 12-year course in general English. The curriculum was written especially for Palestinian schools to realize the aims of the Palestinian Ministry of Education as described in detail in the Ministry's English Language Curriculum for public schools (1999).

2.2.16. General objectives of teaching reading comprehension in English for Palestine

The Ministry of Education (1999, p.31), assigns certain purposes for teaching reading comprehension to be achieved. So, reading passages and topics were carefully chosen with different themes either global or local. In addition, the students' levels and age were taken into consideration when choosing these topics so that they might be suitable for them. The purposes of reading comprehension which are devoted by the Ministry of Education are clarified in the following points:

1. Answering infernal, judgment, factual, and evaluation questions.
2. Reading with correct intonation and pronunciation.
3. Recognize pronoun referents.
4. Generating questions about a reading text.
5. Summarizing a reading text.
6. Making predictions about a reading text.
7. Making inferences about a reading text.

8. Developing awareness of synonyms and antonyms.
9. Developing awareness of semantic fields (word mapping).
10. Identifying the main idea of a reading text.
11. Identifying supporting details.

2.2.17. Objectives of teaching reading comprehension to sixth graders in English for Palestine

English for Palestine 6 is for the last year in the elementary stage, Students here are aged 11-12. It consolidates language and skills from earlier years and teaches practical language skills that are relevant to all students.

The brief summary below lists the main objectives of teaching reading comprehension to 6th Graders.

- The objectives of Grade 6 are:
- The introduction of high-frequency English words.
- To introduce simple and increasingly more complex key grammatical structures.
- To provide opportunities for children to engage in meaningful and authentic activities in English.
- To practice and extend children's abilities in the key skills of listening, speaking, reading and writing.

2.2.18. Commentary

Reading comprehension is a basic skill that any learner needs. In other words, it is one of the most important language skills. It is fundamentally related to meaning, particularly with the transfer of meaning from writer to reader. Reading comprehension is an interactive mental process between a reader's linguistic knowledge, knowledge of the world, and knowledge about a given topic. Comprehension is the result of the interaction between the background knowledge of the reader and the text. It is the fundamental way of learning new information and it is the most significant skill required for the students' success.

Part 3 Vocabulary and its retention

No one can deny the power of words. Perhaps the greatest gift given to learners is a rich amount of vocabulary, which can not only help them in their future life, but also in their future academic life. It has been believed in literature that teaching vocabulary via reading would provide learners more chances to process language use at a deeper level and help them to develop semantic networks and other types of associative links that will facilitate and enhance learning. (Krashen, 1989).

Vocabulary is a fundamental requirement that influences students' achievement in studying English. Without vocabulary no communication, reading, and writing can take place. So, it is important to know what vocabulary is and how vocabulary is defined by some experts. Part two sheds light on vocabulary and its retention..

2.3.1. Definition of vocabulary

Oxford dictionary(2013) provided the following as a definition for vocabulary : " The body of words used in a particular language." According to Cambridge dictionary (2008) vocabulary is "All the words that is known and used by a person." Beck, et al. (2008, p.1) define vocabulary as "words that a reader recognizes in print" and "learning meanings of new words".

Saputra (2007) describes vocabulary in a comprehensive definition as all the words that have meanings, used in a language, and consist of parts like idioms, verbs and pronunciation.

Nash and Snowling (2006, p.336) defines it as "the knowledge of words as well as its' meanings", while Sheehan (2002, p.336) states vocabulary is "The ability to comprehend and use words to acquire and transfer meaning". Hornby (2000) in Oxford Advanced Learner's Dictionary of Current English states that "Vocabulary refers to all the words that a person knows or uses when talking about a particular subject".

Coady (1998) states that "Vocabulary is a set of words used in a particular language. They usually evolves and grows with time, they serves as a fundamental and useful tool for communication and acquiring knowledge. Word knowledge is a fundamental component of communicative competence, and it is significant for production and comprehension in second language". The Longman dictionary (1995) defines vocabulary as all the words that someone learns, knows or uses. Graddol, Cheshire,

Joan, (1987, p. 93) indicate that "words can be regarded as symbols, a symbol of the mental concept that we have".

The researcher views vocabulary as a set of words that an individual necessarily need to keep in contact with others, express himself and achieve his needs and be an effective element. The researcher believes that without vocabulary there will be no progress on the other fields of the learning process. Vocabulary is the base for the other language skills such as reading, listening and writing.

2.3.2. The importance of vocabulary

"Sticks and stones may break my bones, but words will never break me."

Children's nursery rhyme

It's certainly true that sticks and stones will break your bones, but is patently untrue that words will never hurt you. We have all experienced hurtful words, perhaps very hurtful words. Words can be incredibly powerful. Of course, their effect need not be a negative one.

Vocabulary is central derive to English language teaching and learning because without enough vocabulary learners cannot understand each other or express their own ideas. Wilkins (1972) wrote that “. . . while without grammar very little can be conveyed, without vocabulary nothing can be conveyed” (pp. 111–112).

Words are working as the building blocks and basis of a language since they label actions, ideas and objects. Without vocabulary learners cannot convey the intended meaning. In the last decades, experts showed an increasing attention and interest in vocabulary learning strategies since they are found to facilitate L2 language vocabulary learning (Toyoda, 2007).

Lewis (1993) went further to argue, “lexis is the heart or core of language” (p. 89). In fact, students who are interested in developing greater fluency in English, it is important for them to acquire more productive word knowledge and to develop their vocabulary learning strategies. Students often instinctively recognize the importance of vocabulary to their language learning. As Schmitt (2010) noted, “learners care about dictionaries and not grammar books” (p. 4).

Rich vocabulary helps students in understanding and communicating with others in English. It also helps them to master English for their purposes. Alemi and Tayebi

(2011) state that vocabulary knowledge is a crucial component of language proficiency since it provides the foundation for learner's performance in other skills.

Abdal Rahim(2015) indicates. "Teachers of EFL usually observe that students suffers from problems relating to deficiency of lexical knowledge while speaking, listening reading and writing in the L2. The mentioned deficiency causes misunderstanding of any given English texts or any talks by others in English. Sometimes students cannot express themselves effectively because they do not possess the needed vocabulary for successful communication".

Krashen (1989) states that words carry meanings of the language. And this could be the reason that people prefer to take their dictionaries with them while visiting a foreign country rather than grammar books. Read (2000) also held such view. he states that "words in a given language are the most basic units of meaning and users of the language form phrases, sentences and larger units of meaning by using words."

Folse (2008) indicates that in order to improve comprehension and production in the foreign language, learners need a continuous knowledge of vocabulary. He believes that a basic amount of vocabulary may allow students to communicate some ideas to a certain degree. However, better communication can happen when learners have acquired more vocabulary. Richards and Renandya (2002) clarify that if students didn't have efficient vocabulary and strategies for acquiring new vocabs, they will then directly achieve less than their potential and may be become frustrated from making use of language learning.

Vocabulary knowledge also helps in making the meaning of grammatical functions more transparent to students. Harmer (1993, p.153) indicated that "If language structures make up the skeleton of language, then it is vocabulary that provides the vital organs and the flesh". Carter and McCarthy (1988) declare that vocabulary is a crucial significant element of language learning and teaching, specifically in terms of the organization of syllabuses.

Sedita (2005) states that large vocabulary knowledge is a paved way to academic success because it helps learners to understand new ideas and concepts more quickly and deeply than others. Nichols and Rupley (2004) draw an emphasis on the importance of vocabulary, he states that vocabulary is a key to reading comprehension, fluency, writing, and communication with others.

The researcher believes that without sufficient vocabulary, learners will make no progress in any of the four language skills. Vocabulary enables students to express themselves, communicate with each other and understand utterance and written materials. He adds, vocabulary size and depth are significant in mastering the language. Without vocabulary none will be comprehended, read or written. Message also cannot be conveyed without adequate vocabulary. He indicates that vocabulary is a paved way to master both receptive and productive skills more successfully.

2.3.3. The relationship between vocabulary and reading

Research regarding vocabulary and word knowledge found that there is a strong correlation between word knowledge and text comprehension (Beck, McKeown, & Kucan, 2008). According to the National Reading Panel report (2000) "Vocabulary knowledge has a significant role in developing reading skills. As early as 1924, researchers indicated that continuous growth in word knowledge growth is fundamental for enhancing reading power." The NRP indicated that when teachers provide their students key words before reading a certain text, they show greater comprehension than those who do not receive such instruction.

In fact, there won't be reading comprehension without sufficient vocabulary knowledge. The relationship between vocabulary size and reading is a dynamic and complex one. Such relationship can be viewed from two different points of view: The effect of reading on vocabulary size, and the effect of vocabulary size on reading comprehension.

Concerning the effects of the first mentioned point, learners who seek to enlarge their vocabulary size, they have to read extensively in the second language (Krashen, 1989; Nation, 2001). "By reading extensively, learners encounter the most frequent words repeatedly in meaningful contexts."

Regarding the effect of the second point, and according to (Nation & Waring, 2001)"The most frequent 2000 words comprise 80% of all words in a given English text, and a vocabulary size of the 2000 most frequent words enables learners to have "a good degree of comprehension of a text". In addition, A large vocabulary size can impact understanding the grammar of the target language positively. According to Ellis (1995), "knowing the words in a text can have a facilitative effect on learning grammatical rules as learners understand the discourse functions better."

2.3.4. Vocabulary learning and technology

Nowadays, technology seems to be connected to everything in our lives, and language teaching and learning is not an exception. Stockwell (2007) cites, "it's been noticed that vocabulary has been one of the most commonly taught language areas through technology in recent years". Genc (2012) indicates that the enormous rapid advancement and development in computer technologies have been affecting all aspects of life. She also indicates that such technological improvement influence the process of educational discipline. English Wikipedia defines Computer-assisted language learning (CALL) as an approach that puts great focuses on the use of computer technology in teaching or learning a any foreign language to students. Gorjian, et al (2011) indicates that technologies have changed the face of language teaching from being inflexible towards new beneficial areas that help both teachers as well as learners. The emergence of new technologies such as virtual worlds led to remarkable results concerning the educational process. In fact, using technology in education helped teachers and students to teach and learn better and more effective. (Long & Doughty, 2009) states, "There is no doubt that the use of technology in schools can help enhance the quality of input, and the authenticity of resources, provide relevant and useful feedback, connect students with remote audiences, and train them in the use of technological advances that are fundamental skills in everyday life."

(CALL) is a large field with variety of subfields including the use of emails, internet, software, applications. Chapelle (2005) believes that there is an integration between computer and foreign/second language teaching, in his article "computer assisted teaching and testing", he indicates that these changes in (TEFL) and (TESL) were enhanced by computer technology in different subjects like: teaching methodology, materials development, classroom research, diffusion or innovation, program evaluation and teacher education. Kern (2006), and Thorne and Payne (2005) mention that "computer technology continues to increase in everyday utility among language learners as uses of communication devices such as blogs, wikis, and iPods which are cultural practices that students engage in outside of class" (cited in Chapelle, 2005). Zhao, et al (2004) state a common belief that "technology is just a tool, a means to an end in education. They also add that the goal of educators using technology is to address the content of subject matter or some ability or qualities beyond the technology and not teaching their students how to use the technology."

That researcher indicates, The variety of options that technology offer for learners, teachers and the whole educational process such as mp3s, videos, screens, smart boards, etc. have resulted an amazing outputs. He adds, Using technology in education is a preferable new strategy for learners which offers them a great chance to be well engaged in the process. In fact, technology evokes students attention and intention more than any other tool. Although the use and preparation of technology may seem expensive sometimes, the final results show that such use is priceless.

2.3.5. Vocabulary and dictionary use

According to National Geographic Learning, Cengage (2015) in the past decades, vocabulary instruction seemed to be incidental and unplanned, it was driven by learners' questions and "teachable moments." Students were directed to glossary or a dictionary when encountering an unfamiliar word, or were given an instant oral definition. It's not surprising that the results of such use resulted negatively in long-term word learning and retention. (Nagy, 2005) indicates that, "Students need multiple exposures to words in multiple contexts before they understand, remember, and apply them." Although most of teachers and learners of foreign languages believes that dictionary definition is a vehicle for teaching and learning words' meanings, it's undeniable that such use is not suitable for all learners. Sometimes proficient adult readers face difficulty while decoding a word's meanings from a dictionary. (Beck, et al., 2002) states, "By design, dictionary definitions are extremely concise and precise. The result can be so cryptic that it's difficult to grasp a word's meanings or apply those meanings in context."

The researcher believes that, although using dictionaries can't fit young learners, it's good to train learners how to use dictionaries to look for new idioms or vocabs. However, intensive use of dictionaries may result in bad effects concerning long term retention. He adds, students who are used to resort to dictionaries intensively lose the ability to think creatively and won't even tend to think on possible meaning of words. The researcher noticed that such students face difficulties in exams where the use of dictionaries is forbidden.

The researcher indicates that, teachers should resort to new effective strategies to help their students gain the meaning of words effectively. They should also emphasize on

using context to figure out word meanings. Texts are full of clues that support incidental word learning.

Graves (2006) sums up the descriptive research on learning from context:

"The probability of learning a word from context increases substantially with additional occurrences of the word. That is how we typically learn from context. We learn a little from the first encounter with a word and then more and more about a word's meaning as we meet it in new and different contexts."

2.3.6. Which words to teach?

The simple answer for such question could be: We need to teach the vocabulary that matter most. Such kind of words are:

1. Central to comprehension

Words that are essential for comprehending texts, utterance and many other aspects of language and without the knowledge of these words, the selection (its main idea, theme, or plot) won't make sense.

2. Personally valuable

Words that are essential for students to discuss Questions, engage in conversations, etc.

3. High-utility academic words

Words that students will encounter in multiple subject areas and in life.

This balanced model of vocabulary development is broad enough and intensive enough to meet the needs of students who have relatively limited vocabularies, are English learners with limited oral vocabularies in English, possess adequate but not exceptional vocabularies, or already have rich vocabularies and are ready for the challenge of deepening their word knowledge and developing increasingly sophisticated vocabularies.

2.3.7. Effective, Comprehensive vocabulary instruction

Graves (2006, 2000) has identified four key components:

1. Rich and varied language experiences.
2. Direct teaching of individual words.
3. Independent word-learning strategies.
4. Fostering word consciousness.

2.3.7.1. Rich and Varied Language Experiences

Providing students a varied and rich language experiences allows them to learn words through reading, listening, speaking and writing. Learners benefit from participating in give-and-take discussions where they have the chance to thoughtfully discuss topics (Alvermann, 2000). (Anderson & Nagy, 1992;Stahl, 1998) state, "From the intermediate grades on, reading becomes the principle language experience for promoting vocabulary growth. In fact, some researchers believe that increasing the amount of reading students do is the single most powerful thing that we can do to increase their vocabularies."

2.3.7.2. Direct Teaching of Individual Words

According to (NRP,2000), direct instruction in vocabulary increase word knowledge and long-term reading comprehension. When it is rich enough, Instruction seems to be most deep, effective and extended and when it leads learners to process new word meanings in multiple contexts actively. In this new view of robust instruction, vocabulary is introduced using a consistent, predictable routine (Beck et al., 2002):

- a. Teachers' pronunciation guide students to pronounce the word correctly (by syllables and as a whole).
- b. Students' Explanation gives a clear, student friendly explanation of the word's meaning.
- c. Exempling, which help Students to notice the word meaning in a variety of contexts.
- d. Encourage Elaboration, Students elaborate word meanings by generating their own examples and through practice.
- e. Assess Teachers check student understanding through both informal, ongoing assessment and summative evaluations. In all cases, assessments go beyond simple memorization or matching, requiring students to demonstrate a deeper level of thinking and understanding.

2.3.7.3. Independent Word-Learning Strategies

Because researchers count words in different ways, estimates of student vocabulary size vary dramatically. Nagy and Anderson (1984) estimated that "an average twelfth grader knows about 40,000 distinct word families (e.g., history, historian, historical are

part of one word family)." Clearly there are far more words to be learned than can be directly taught. Word-learning strategies include using knowledge of word families and cognates, morphological analysis, contextual analysis, and consulting appropriate references are crucial for learners to successfully learn words .

2.3.7.4. Fostering Word Consciousness

Another key aspect of effective vocabulary instruction is fostering word consciousness. This means developing students' interest in and awareness of words and how they can be used. It can occur throughout the instructional day with practices such as modeling adept diction, word play, researching word origins, and examining students' and professional writers' word choices.

Graves(2006) indicates that, an important role of foreign language teachers is to help their learners find the most easiest and efficient way to convey new acquired information into their already existing system of the mental lexicon. In addition, learners are in need to be able to store the information as long as possible. Thornbury (2004, p.24-26) summarizes a research into memory, which suggests principles supporting the process of permanent or long-term remembering. In this summary he lists several techniques to follow to make vocabulary teaching as effective as possible: Firstly repetition, yet what he means is "repetition of encounters with a word" (Thornbury 2004, p.24), e.g. in reading. Furthermore, he stresses the importance of retrieval and use of the new words. While practicing, learners should make decisions about words, e.g. match rhyming words or use new items to complete sentences. Moreover, personalizing vocabulary practice has proved to be beneficial for remembering along with spacing, which means that presentation of new vocabulary is divided into more widely separated sequences followed by repeated revision later on with gradually extending periods between them, e.g. the end of the lesson, next lesson, next week and so on (Thornbury 2004, p. 24). Another helpful element is motivation, which is closely linked with attention. "A very high degree of attention (called arousal) seems to correlate with improved recall" (Thornbury, 2004, p. 25). Connected to this, emotional value of words should be considered as well.

Finally, Thornbury (2004, p. 25) advises teachers to visualize a picture for a new word or to link an abstract word with some mental image. Images drawn by students themselves have the best outcomes. Besides imaging, there are other mnemonics, such

as making clues from associations with a similarly sounding word and its meaning in the mother tongue. Again, Thornsbury claims that students' own images have the best influence on remembering. When examining this matter, Gairns and Redman (1992) stress the importance of meaningful activities in the classroom. They point out that meaningful tasks need to be analyzed in greater detail and therefore information is more likely to be retained in long-term memory.

2.3.8. Approaches to Vocabulary Instruction

(Herman and Dole, 1988) indicate that the following three approaches are of the most important ones:

2.3.8.1 Definitional Approach

Most of foreign language teachers all over the world tend to use The traditional approach to vocabulary instruction, such approach requires students to learn words' definitions, either by drilling or by looking words up in a dictionary (Manzo & Sherk, 1972; Petty, Herold, & Stoll, 1968 as cited in. Herman & Dole, 1988). This approach has the following two advantages: first, a large number of words can be covered. And second, learning a definition is not very time consuming. However, many experts noted that although this approach is practical for teaching a large number of words, it also has several limitations. For instance, learning definitions of words doesn't guarantee comprehension of a selection. Teaching students only definitions of difficult words before they read a selection has improved the comprehension of that selection in some studies (e.g., Kameenui, Carnine, & Freschi, 1982) but not in others (e.g., Ahlfors, 1979; Tuinman & Brady, 1974). "Teachers must consider the relation between the to-be-learned word and the concept it represents in order to use the definitional approach more effectively" (see Graves, 1984; Jenkins & Dixon, 1983). To judge how effective the definitional approach is requires us to find out how much knowledge readers have about a certain topic. Definitions can be very effective in teaching vocabulary. For example, if students already know the meaning of "porter" or "bearer" and they know how these words fit into a network of concepts, or schema, such as "ways of moving things" or "occupations," then a definitional phrase that links that knowledge to a word label may be sufficient for establishing an understanding of hamal. On the other hand, if a word represents a more complex and little understood concept like heterodyne, then

providing readers with a definitional phrase such as the following one falls far short of the kind of information needed to understand the meaning of the word.

heterodyne: adj., of or relating to the production of an electrical beat between two radio frequencies of which one usually is that of a received signal-carrying current and the other that of an uninterrupted current introduced in the apparatus. [Webster's Third New International Dictionary, 1981, p. 1062]

Using only this definition, could students write the word in a sentence that clearly demonstrates its meaning, write specific examples of contexts where the word can be used or explain how heterodyne is similar to but different from descriptions of other frequencies? When the definitional approach alone is used to teach such a word, most students fail to understand the word because they do not understand the underlying concept, nor do they know how it is like and unlike other closely related words or concepts (see Graves, 1984). The usefulness of the definitional approach also depends on how much knowledge readers need to have about a word in relation to a particular reading task (Mezynski, 1983). When comprehension of a passage depends on having a thorough understanding of a word, and students lack knowledge of the underlying concept, then more than the definitional approach is needed to learn that word. However, if a word plays a relatively minor role in a passage, students may need to know only some partial meaning of the word, and reading a definition may provide that information. For example, to comprehend a mystery story, students may only need to know that heterodyne has something to do with frequencies. The definitional approach is most effective, then, when students already know the underlying concept or closely related words or concepts. Then a synonym or short phrase alone may encourage students to make meaningful connections. When knowledge of underlying concepts is missing, learning definitions is unlikely to result in anything more than partial knowledge. Some researchers believe that even partial knowledge may be useful if it provides a base for learning more about a word in future encounters (Beck & McKeown, 1985; Nagy & Herman, 1985, 1987). Most of the time, however, learning definitions does not foster integration of new knowledge with existing knowledge. Without achieving this integration, students fail to understand the word, and comprehension suffers. This approach therefore should not be used as the only method of instruction.

2.3.8.2. Contextual Approach

contextual approach is designed to teach the meanings of new vocabulary through encouraging students to study the context of surrounding words. In discussions about such approach, two kinds of context usually get confused (Beck, McKeown, & McCaslin, 1983). The first type of context can be labeled pedagogical or instructional. This context refers to sentences specifically written to introduce the meanings of words. A second type, natural contexts, refers to text sentences written to communicate ideas and not to teach word meanings specifically. An underlying assumption of the contextual approach is that students already possess some knowledge relevant to the topic of the text in which an unknown word is embedded. Students are then expected to reason from this knowledge to figure out a meaning for the word. Needless to say, if students do not possess appropriate background knowledge, they will profit little from this method. For example, it would be difficult for lay readers to develop a definition of "heterodyne" from reading a physics text. Instructing students about how they can use context to reveal some or all of the meaning of a word is important in view of the fact that children learn most words incidentally rather than through any formal instruction (Jenkins & Dixon, 1983; Nagy et al., 1985a, 1985b; Sternberg, 1987). If students could be taught to reason effectively about the meaning of a word from its context, their vocabulary knowledge might increase, especially the vocabularies of students who frequently read for recreation (Nagy & Herman, 1985).

2.3.8.3. Conceptual Approach

When students do not know underlying concepts related to words, as is the case in many content areas, a definitional or contextual approach to vocabulary instruction may be inadequate, especially when understanding those concepts is important for establishing or maintaining comprehension. The goal of the conceptual approach to vocabulary instruction is to develop extensive knowledge of a word, which leads to a thorough understanding of the word-how the word is similar to and different from related concepts and how the word is used in a variety of situations. How might a teacher implement a conceptual approach to vocabulary instruction? The key is having students understand a concept at a personal level and then understand its relations to similar concepts (Blachowicz, 1986; Carr & Wixson, 1986; Thelen, 1986). Following are a series of activities that demonstrate a conceptual approach to teaching a word:

1. Teacher begins with what students already know.

2. Teacher connects new information to what students already know.
3. Teacher leads a discussion that centers on how the new concept is like and unlike related, known concept.
4. Teacher draws together experiences and discussions into a visual display.

2.3.9. Kinds of vocabulary

Researchers and experts have classified vocabulary into several kinds . To have a good understanding of vocabulary, teachers should distinguish between these different types. The followings are some types of vocabulary as discussed in different books:

2.3.9.1. Receptive and productive vocabulary

Nation (2001) divided vocabulary into two types according to its use: receptive and productive / expressive vocabulary.

Receptive vocabulary refers to students' ability to receive and understand words after being heard or seen. On the other hand, Productive vocabulary refers to students' ability to produce words when they want to write or speak. It is generally agreed that learners know words receptively first and only after incidental or intentional learning become available for productive use. It's also agreed that receptive vocabulary size is much larger than their productive vocabulary size.

2.3.9.2. Passive and active vocabulary

Such kinds of vocabulary relates to the use process. Passive vocabulary refers to the words that students understand but don't use yet. While active vocabulary on the other hand, refers to the words that students understand and use in writing or speaking.

In fact, when being properly activated ,vocabulary will shift from passive to active one. Therefore, the view of a continuum appropriately expresses the dynamic complexity of vocabulary knowledge (Zhiying, Teo, & Laohawiriyanon,2005).

In addition, **passive vocabulary** . includes those stored words in verbal memory that students partially 'understand,' but not well enough for active use. These are words that people meet less often and they may be low frequency words in the language as a whole. In other words, activating them takes longer and it demands greater stimulus than most textual contexts provide. Words stop being passive if people are regularly contracting relations that activate them, since this lowers the amount of stimulus needed to put them to use. A facility in using the words develops. Again constraints of another

kind in the extra linguistic context may also restrict the active use of some words. This can happen even when words are available for active use in principle, such as cultural taboo words that most people know but rarely use outside certain settings." (Corson, 1995).

(Ellis, R, 1990) states, "**Active vocabulary** consists of those words over which one can use in his speech and writing. He knows the meaning of those words accurately. Active vocabulary refers to the productive side of language. It consists of the words one uses confidently because he understands their meanings and usage.

In order to give the proficiency in spoken and written language, words must continuously be added to the active vocabulary of the students. Active vocabulary of a language calls for:

- a. The use of right word in right place.
- b. The spontaneous recall of words.
- c. Grammatical accuracy i.e., use of correct tenses, inflections and word order.
- d. In speech, fluency and ability to reproduce correct sounds, pronunciation, intonation, rhythm etc.

2.3.9.3. Content words and function words

When discussing about words, we sometimes make an important distinction between two types of words: content words and function words (also referred to as open-class words and closed-class words, respectively).

Examples of content words include the English words uncle, manage, huge and rapidly. These words belong to the major parts of speech that consist of nouns, verbs, adjectives and adverbs and represent ideas, actions, objects and attributes. They are also called "open-ended" or "open-class" words because we can frequently add new words to this class of words. That is, we can create and add an infinite number of new words to these classes.

On the other hand, function words are those which do not have clear lexical meanings or obvious concepts related to them. They are lexically unproductive and are generally invariable in form. They belong to grammatical or function classes that consist of a small number of fixed items, such as articles, demonstratives, quantifiers, prepositions and conjunctions. These function words denote grammatical relations and unlike content words, words have little or no semantic content. Examples of function words in English include articles (the, a), demonstratives (this, that), quantifiers (most,

few, some, little), prepositions (up, from, to, with), and conjunctions (but, or, and, yet). To illustrate, consider the articles the and a/an. The essential feature of these articles is that they function grammatically to indicate whether a noun is definite or indefinite (the teacher or a teacher). The small set of personal pronouns such as I, me, mine, he, she, and so on are part of this class (Fromkin, Rodman, & Hyams, 2010).

2.3.10. Types of vocabulary

In his book "The Bridge of Vocabulary" (Montgomery, 2007) states, "The first two constitute spoken vocabulary and the last two, written vocabulary. Children begin to acquire listening and speaking vocabularies many years before they start to build reading and writing vocabularies. Spoken language forms the basis for written language. Each type has a different purpose and, luckily, vocabulary development in one type facilitates growth in another."

2.3.10.1. Listening Vocabulary:

The words we hear and understand. Starting in the womb, fetuses can detect sounds as early as 16 weeks. Furthermore, babies are listening during all their waking hours – and we continue to learn new words this way all of our lives. By the time we reach adulthood, most of us will recognize and understand close to 50,000 words. (Stahl, 1999; Tompkins, 2005) Children who are completely deaf do not get exposed to a listening vocabulary. Instead, if they have signing models at home or school, they will be exposed to a “visual” listening vocabulary. The amount of words modeled is much less than a hearing child’s incidental listening vocabulary.

2.3.10.2. Speaking Vocabulary:

The words we use when we speak. Our speaking vocabulary is relatively limited: Most adults use a mere 5,000 to 10,000 words for all their conversations and instructions. This number is much less than our listening vocabulary most likely due to ease of use.

2.3.10.3. Reading Vocabulary:

The words we understand when we read text. We can read and understand many words that we do not use in our speaking vocabulary. This is the 2nd largest vocabulary IF you are a reader. If you are not a reader, you cannot “grow” your vocabulary.

2.3.10.4. Writing Vocabulary:

The words we can retrieve when we write to express ourselves. We generally find it easier to explain ourselves orally, using facial expression and intonation to help get our

ideas across, then to find just the right words to communicate the same ideas in writing. Our writing vocabulary is strongly influenced by the words we can spell.

2.3.11. Intentional and incidental vocabulary learning

In his paper to explores the distinction between intentional and incidental vocabulary learning (Ahmad,2011) states, " Incidental learning is the process of learning something without the intention of doing so. It is also learning one thing while intending to learn another (Richards & Schmidt, 2002). In terms of language acquisition, incidental learning is said to be an effective way of learning vocabulary from context (Day, Omura, &Hiramatsu, 1991; Jenkins, Stein, & Wysocki, 1984; Nagy, Herman, & Anderson, 1985; Saragi, Nation, & Meister, 1978).

Incidental Vocabulary Learning motivates learners for extensive reading. It involves learners' ability to guess the meaning of new words from the contextual clues. Incidental learning occurs more particularly through extensive reading in input-rich environments, albeit at a rather slow rate (Coady, J 2001). According to Harmer (2003), Nation (2001), extensive reading is a pleasurable reading situation where a teacher encourages students to choose what they want to read for themselves from reading materials at a level they can understand. Karashen's (2003) comprehension hypothesis claimed that comprehensible input is a necessary and sufficient condition for language development and extensive reading programs aim to develop reading fluency, and reading skills in general , while at the same time consolidate knowledge of previously met grammatical structures and vocabulary. Other studies have emphasized benefits such as increased motivation to learn the new language and renewed confidence in reading (e. g., Brown, 2000; Waring & Takaki, 2003). In a further study conducted by Horst (2005) , a modified vocabulary knowledge scale, immediate post-test measure indicated that of 35 new words available for learning in self-selected graded reading materials , 18 words were learned: a gain of 51 % . These gains are comparable to those achieved in the A Clockwork Orange investigation conducted by Saragi et al. (1978) In their study, learners were able to correctly identify the meanings of 75% of target words, especially the frequently recurring ones, in an unannounced multiple-choice test given immediately after the reading treatment. For a meta-analysis of these oft-cited, learning from context studies of vocabulary growth, see Waring and Nation (2004).

As learners read systematically arranged reading materials they often meet new words in the contexts and learn them faster. O' Harra (2004) claimed that "context is the setting and surrounding of a word. Therefore when we listen to someone's talk, the context of a word is the statement that includes the word". "When we read new words in a written context one or two nearby words may explain the meaning of new words or sometimes the paragraph may tell us what the new words mean".

Incidental Vocabulary promotes deeper mental processing and better retention. The learners get themselves fully involved in the process of deciphering the meaning through the clues available in the text. They think and rethink about the new words involving cognitive process which helps the learners retain the words for a longer period of time. Cognitive process includes both receptive and productive aspects of vocabulary. Learners understand not only the meanings in the given text but the related grammatical patterns, common lexical sets and typical association of the word with the context. Learning vocabulary through extensive reading also improves learners' fluency. Learners look at group of words rather than each individual word while reading. Hulstijn & Laufer, (2001) were of view that the words that learners encounter in incidental vocabulary learning will be retained in the long term memory and could be used more confidently in different situations. On the contrary, intentional vocabulary learning based on synonyms, antonyms, word substitution, multiple choice, scrambled words and crossword puzzles, regardless of context, is not so effective, because learners are more prone to rote learning .They cram the meaning of the new words without undergoing cognitive process. A very few words learned through this method get transformed into active process. Whereas reading new words and inferring the meaning through context will be more productive because it sharpens the ability for guessing. By practicing guessing the students can infer the general import and begin to understand the meaning gradually. Hence the process of guessing is of prime importance for vocabulary learning. Guessing is useful for both the proficient learners and low proficiency- level learners. While guessing, the learners' focus gets increased, and after guessing when the new words are learned by consulting dictionaries, they could be retained for a longer period of time. Hence the guess should be tried out in the context first, then to see whether it makes sense or not, a dictionary may be consulted. Williams (1986) advises that guessing activity should be demonstrated on chalkboard by circling

the unknown words and drawing across from other words that give clues to infer its meaning. The learners should see if the unknown words can be analyzed into parts. They should check if the meaning of the parts matches the meaning of the unknown word. The words made of prefixes and suffixes could easily be understood by learners if they are already taught the important prefixes and suffixes. Learners should also determine the parts of speech by looking up bilingual electronic dictionary. Once they find the words and their derivatives, they come to know not only so many words and phrases within fraction of second but how to use them correctly in different contexts."

2.3.12. How to teach vocabulary?

According to (Bakheet,2016) states, "To get better results in the teaching of vocabulary, the teacher must consider certain principles of vocabulary development. The problems of vocabulary teaching are how to select what words to teach and how. "One forgets words as one forgets names. One's vocabulary needs constant fertilizing or it will die." Here, Waugh (1962, p.217) indicates how important and challenging the process of teaching vocabulary is.

Renatha (2009) also adds "The success of the students in learning English vocabulary depends on the strategy used by teachers in teaching English vocabulary because the method of English language teaching is one of the very important parts which will give influence to the children for increasing their ability." There are many traditional pedagogical methods for vocabulary acquisition. They include word-lists, dictionary use, workbooks, teacher-made materials, group discussion, and visuals such as pictures and real objects."

Nation (2001) points out that teachers should also know how to present the words in a way that will be easy for the students to best remember the word. Students need to relate vocabulary with their own lives and they also need to categorize the word and to distinguish whether it is a verb , an adverb, an adjective, or a noun as this also helps some students to understand syntax.

An important vocabulary acquisition strategy which Nation (2001) calls "noticing" is seeing and recognizing using meta-cognitive skills a word as something to be learned. To do this appropriate materials are vital if students are to have some ownership of this learning and good quality learning materials also help students to study vocabulary effectively as well as growing as a self-regulated learner in the following ways:

- clearly marked vocabulary lessons.
- a focus on vocabulary practice and recall of past vocabulary.
- giving and studying lists of vocabulary words from context.
- Structured vocabulary notebook exercises which are designed to make students focus on a particular set of vocabulary words are a good way of developing the idea of noticing (Nation, 2001).

Moreover, the National Reading Panel's review (2004) - as stated in Hackman (2008) - identifies five basic approaches to vocabulary instruction which should be used together:

- Explicit instruction (particularly of difficult words and words that are not part of pupils' everyday experience.).
- Indirect instruction (i.e. exposure to a wide range of reading materials).
- Multimedia methods (going beyond the text to include other media such as visual stimulus, the use of the computer or sign language).
- Capacity methods (focusing on making reading an automatic activity), and
- Association methods (encouraging learners to draw connections between what they do know and unfamiliar words.).

Evidence from Apthorp (2006) supports and extends the National Reading Panel's conclusions. She concludes that there was solid evidence base supporting three key elements of vocabulary instruction:

- Defining and explaining word meanings;
- Arranging frequent encounters with new words (at least six exposures to a new word); and
- Encouraging pupils' deep and active processing of words and meanings in a range of contexts. These kinds of activities are effective for vocabulary development and improved reading comprehension.

Following are a few methods that can be adapted to teach vocabulary in an EFL classroom as stated in Kochappilly's (2011), and Lain's (2006):

1. Brainstorming
2. Visual aids
3. Dramatization
4. Drawing Pictures

5. Playing with Words
6. Word Cards
7. Word Association
8. Matching Columns
9. Music and jazz
10. Word map

2.3.13. Techniques in vocabulary teaching

(Washang,2009) states, unfortunately, many teachers tend to stress teaching mostly on grammatical rules. In other sides, they merely teach reading comprehension without giving clear explanation about the techniques or methods on how to recognize the meaning of words rather than on vocabulary in detail. In the line these ideas, the teaching of English vocabulary may often be neglected in the teaching-learning process. For this reason, Meara (1980) comments that "vocabulary is considered as neglected aspect of language learning that has not significantly changed today.

To solve these problems, English teachers, of course, have to provide practical techniques on teaching vocabulary that the students are able to develop their learning of new words independently. Hence, Nattingger (1988, p.63) identifies that "guessing vocabulary from context is the most frequently way of discovering the meaning of new word." Similar to this Idea, Oxford and Scarcella (1994, p. 236) also reveal that "guessing the meaning word from context is the most useful vocabulary learning technique."

Kustaryo (1988, p.24) reveals there are some possible ways of learning activity so that the students' motivation may increase in learning English especially regarding to the meaning of words. They are:

- **Learning vocabulary through creativity.** It means that the students can learn the English vocabulary by using the pictures.
- **Learning vocabulary through context clues.** In essence, the students may find out the English vocabulary based on clues in the surrounding context.
- **Learning vocabulary through guessing.** It may be speculated that the students may learn the meaning of word in context and it needs a special approached.
- **Learning vocabulary though definition.** It is useful in guiding the students to be able to define the meaning of words and to arrange word into the correct sentence.

- **Learning vocabulary through derivation.** It means that the students must be able to derive words correctly. It comes only with practice or by studying the rules of how to form noun, adjective, adverb.

According to (Gogoi, 2015) There are a good number of techniques of teaching vocabulary some of which are discussed below:

1. **Showing pictures or using Audio-visual aids:** To a certain extent, the language teacher should have the mastery over the skill of drawing so as to teach vocabulary. He should produce some picture of animals, birds, fruits, vegetables etc. The teacher can also use some other audio-visual aids to teach vocabulary properly.
2. **Showing real objects or models:** The objects which the teacher can easily bring in the classroom should be shown to the students. For example, stick, stone, maps, clock etc.
3. **Miming or performing an action:** To teach some words, the teacher should actually perform the action like walking, writing, laughing etc. in the class.
4. **By framing illustrative sentences:** These sentences should be such that meaning of the words flashes from the context clear as crystal. For example, the train left the station at 7.55. I could not catch it. I missed the train.

It should be always kept in mind that this type of sentences should be simple in structure.

5. **By associating with other words:** The teacher should try to associate a new word with the word that is already known to the students. This can be done by asking and giving examples of synonyms and antonyms. Referring to a thesaurus is, too, a useful method.
6. **Identifying the lexical set:** Ability to identifying the lexical set is very essential in teaching vocabulary. For example, accelerator, breaks are the words of the some lexical set.
7. **Breaking words into component units:** The meaning of words should be explained by breaking words down into their component units and providing the meaning of each unit separately, and then giving the combined root + affix meaning. For instance, words such as 'inject', 'eject', and 'deject' could be explained as follows:

Inject = in(inside) + ject (throw) = to insert, as in ‘inject a syringe’.

Eject = e (away) + ject(throw) = to throw out, as in ‘eject oneself from an airplane’.

Deject= de(down) + ject(throw)= to throw down’ to make low in spirits.

Despite some limitations, the analytical method will at least give us the core meaning from which other meanings have diverged.

8. **Exposure of different contexts:** Learners should be exposed to different kinds of contexts in which a word may be used, to ensure its proper usage. One context does not ensure mastery of the word. The teacher should give proper guidance to the students to work with the new words actively, regularly and systematically.
9. **Selecting the bases and their order of presentation:** The selection of bases and their order of presentation should be made in accordance with their frequency of use and proliferation, i.e., those that are more prolific should be introduced first. It has been asserted that more than 240 words have sprouted out of the Latin word ‘spectare’ meaning to ‘see’.
10. **To give some importance on word-formation:** The teacher should teach the different affixes (prefixes and suffixes) and their functions should be taught in order to give proper interpretation of a new word. Words can be grouped into clusters on the basis of their affixes. Knowing the meaning of a prefix or a suffix will definitely help learners to understand the meaning of a word.
11. **Crossword puzzles: Crossword puzzles help in studying vocabulary.** Almost all the English newspapers have crossword puzzles. The teacher should produce adequate crossword puzzles for the sake of teaching vocabulary. This is a useful tool in building one’s vocabulary.
12. **Word games:** Sometimes the teacher should conduct some word games among the students in the classroom. This will help the students a lot because the process of learning vocabulary becomes an entertaining work.
13. **Giving equivalents in mother-tongue:** Most of the students may not be acquainted with all the terms in the target language. But those terms can be taught through the medium of their mother-tongue. The barrier of understanding the meaning of some specific words can be removed in this way.

14. **Encourage the students to use a dictionary:** Students should be always encouraged to use a dictionary. It is always beneficial to use a monolingual dictionary. To get a wide exposure to the language, it is an essential act which the students should be advised to perform

2.3.14. Principles in teaching vocabulary:

Nation (1990) concludes the following principles to be considered in teaching vocabulary:

1. Keep the teaching simple and clear. Don't give complicated explanations.
2. Relate the present teaching to past knowledge by showing a pattern or analogies.
3. Use both oral and written presentation - write it on the blackboard as well as explaining.
4. Give most attention to words that are already partly known.
5. Tell the learners if it is a high frequency word that is worth noting for future attention.
6. Do not bring in other unknown or poorly known related words like near synonyms, opposites, or members of the same lexical set.

2.3.15. Six Steps to Better Vocabulary teaching:

Marzano (2004, as cited in Bakheet,2016) mentions the following six-steps to better vocabulary teaching,):

1. Provide a description, explanation, or example of the new term.
2. Ask students to restate the description, explanation, or example in their own words.
3. Ask students to construct a picture, pictograph, or symbolic representation of the term.
4. Engage students periodically in activities that help them add to their knowledge of the terms in their vocabulary notebooks.
5. Periodically ask students to discuss the terms with one another.
6. Involve students periodically in games that enable them to play with terms.

2.3.16. Vocabulary Retention

Vocabulary items are often deemed as “building blocks” of a language (Amirian & Heshmatifar, 2013). Without the knowledge of a certain amount of vocabulary in the target language, learners cannot effectively learn to listen, speak, read, or write in the language (Nation, 2001). However, vocabulary learning is a complicated process in which several skills are involved. They are vocabulary acquisition, vocabulary retention, and vocabulary transfer (Schneider et al., 2002).

(Gu, 2003) indicates, The first stage in vocabulary learning is to memorize the target words. But the problem is that these words might not be correctly recalled over a long period of time. This problem obviously has to do with our memory.

(Bakheet,2016) states, "Most language learners seem to think that once they have studied particular words, they have completed learning those words. They do not do any further systematic study to remember and use them in other contexts. However, overtime, they may forget some of the learned words either partially or completely. Thus, retention is very important in the learning process. According to Yu-Ling (2005), learning, retaining and recalling the new word meaning have always been the main concern of not only EFL learners in reading comprehension, but also those who want to learn English language outside the academic atmosphere. When EFL learners start to read a text, what comes to their minds is how to learn and recall the new vocabulary meanings.

2.3.16.1. Vocabulary Retention Definition

Thornbury (2004,p. 23) indicates that learning is remembering; the learner needs not only to learn a lot of words, but to remember them. Bahrick (1984) states that how well people remember something depends on how deeply they process it.

Vocabulary retention has been defined as “the ability to recall or remember things after an interval of time. In language teaching, retention of what has been taught (e.g. grammar rules and vocabulary) may depend on the quality of teaching, the interest of the learners, or the meaningfulness of the materials” (Richards & Schmidt, 2002, p. 457).

Parle et al. (2006) also defines memory as the process of encoding, storing, and retrieving information.

The researcher defined vocabulary retention as, The ability to save taught words in mind and recall them once again when needed to be used in different contexts.

2.3.16.2. Retention process

Memory is considered an essential factor for learning. No one can learn without memory and all what we learn would be useless if we cannot remember things. Thus, retention is very important in learning process. According to Yu-Ling (2005), learning, retaining and recalling the new words meaning have always been the main concern of not only EFL learners in reading comprehension, but also those who want to learn English language outside the academic atmosphere. When EFL learners starting to read a text, what comes to their minds is how to learn and recall the new vocabulary meanings.

Souleyman (2009, p. 108) mentions that retention is a function of memory that can be defined as including more complex functions as memorizing or learning, retention, recall, and recognition. He adds that there are processes that precede retention which are noticing, intake, and storage in the short term memory and later in the long- term memory.

(Ge,2015) indicates, "From an information processing perspective, three types of memory can be identified: **sensory memory, short-term memory and long-term memory** (Carlson, 2010). Sensory memory is to tackle the sensory information which is perceived by sensory receptors (such as eyes and ears). An example of sensory memory is that after we have been exposed to an item, we probably will remember it at other times when we see it again. According to some scholars, this type of memory is very limited in capacity and cannot be prolonged via rehearsal (Sperling, 1963). Short-term memory deals with the information perceived in an active and readily available state. Like sensory memory, the capacity of short-term memory is also very limited, though the capacity can be increased by using the technique of chunking (Miller, 1956). Unlike the former two types, long-term memory is both larger in capacity and longer in duration. It is said that information held in long-term memory can remain indefinitely (Atkinson & Shiffrin, 1968).

From the above analysis, it is clear that information held in long-term memory is most likely to be retrieved over a long period of time, which is also a desired outcome in vocabulary learning. In other words, the ultimate goal of vocabulary learning is to retain the target words in our long-term memory, so that we can easily retrieve them when we want to use them."

2.3.16.3. Vocabulary Retention strategies

Mnemonic strategies and spaced repetition are seen effective techniques to ensure retention of newly-learned vocabulary items for a longer period of time (Ellis, 1995; Schmitt 2002). In general, mnemonics are described as devices to aid the memory; a pattern of letters, ideas, or associations which assist in remembering information or facts (Oxford English Dictionary, 2005). One of the main characteristics of mnemonics is that new learning materials are learned by linking them with the existing ones (Ellis, 1994). In foreign language vocabulary acquisition, mnemonic strategies mainly include using keywords and using imagery (Ellis, 1994; Hulstijn, 1998).

Using keywords involves the establishment of an acoustic link between an L2 word to be learned and a word in L1 that sounds similar (Ellis, 1995). For instance, the Russian word *linkor* (battleship) can be learned by establishing an acoustic link with the English word *Lincoln* (Atkinson & Raugh, 1975 cited in Ellis, 1995, p. 115). Using imagery involves the establishment of an image link between an L2 word to be learned and a word in L2 that sounds similar. For instance, the English word *revenue* can be learned by first establishing an acoustic link with the Turkish word *revani* (a traditional Turkish dessert) and then visualizing a man who sells *revani* to earn money (Duyar, 2005).

Spaced-repetition is also regarded as an effective technique to ensure retention of newly-learned vocabulary items for a longer period of time (Schmitt, 2002). Spaced-repetition is a learning technique in which subsequent repetitions of learning material are separated by increasing intervals of time (Baddeley, 1982). Spaced repetition was developed on the basis of how human memory works.

According to studies on memory (Baddeley, 1982; Bahrick et al, 1993), dividing learning practice time equally over a period leads to better learning and remembering. The studies suggest extending the space between successive repetitions gradually since practicing items massively at one time does not result in better learning and retention. Baddeley (1982, p.29) describes the spaced repetition sequence by stating “if the learner fails an item in the learning material, it should be presented after a shorter delay; whenever the student is correct, the delay should be increased.”

Although the studies on memory and spaced-repetition have resulted in positive findings, and although the findings have been widely known by language educators, spaced repetition has not been widely integrated into language learning programs (Ellis, 1995; Schmitt, 2002). When it is implemented, spaced repetition may be able to optimize the vocabulary acquisition process for second language learners as they may

remember words better if the words are repeated in a spaced manner rather than in a condensed or unsystematic manner.

Thornbury (2002, p. 23) indicates that learning is remembering; the learner needs not only to learn a lot of words, but to remember them. Bahrick (1984) states that how well people remember something depends on how deeply they process it. Therefore, various procedures have been recommended to facilitate vocabulary retention. To retain the meaning of a word, learners must engage in a deeper analysis of the word's properties rather than simply understand its meaning in context. In the context of word learning, a deeper level of processing means a stronger connection between the word form and its meaning (Craik & Tulving, 1975).

Haycraft (1978 cited in Khabiri & Pakzad 2012) states that the words which are related to each other can be easily retained because using the meaning of words together with the whole meaning of the sentences in which they are embedded is the deepest level of processing and ensures the best retention.

2.3.16.4. Recommended procedures to facilitate vocabulary retention

Bahrick (1984) states that how well people remember something depends on how deeply they process it. Therefore, various procedures have been recommended to facilitate vocabulary retention. Concentration on features of the new word and its textual environment is supposed to facilitate retention. Learning in context depends on repeating, re-cycling, and re-presenting vocabularies as well as re-noticing them by the learner. It has been suggested (e.g. Haastrup, 1989; Modria & Wit-de Boer, 1991; Xialong, 1988, as cited in Hedge, 2000) that retention is related to the condition in which the meaning is inferred and the more analysis involved, the better the retention. There is, yet, another aspect to the condition of inferring meaning of the word which enhances vocabulary retention. That is, retention depends in some way on the amount of mental and emotional energy used in processing a word and readers have developed certain strategies that could assist emotional and mental processing such as meta-cognitive strategies. Critical reading strategies might be another series of strategies that can boost the level of mental and emotional involvement of the learners with the word meaning because readers try to analyze the author's values and beliefs and evaluate them against their own.

Research reported in Nation (1982, p.18) suggests that similarities in sound, morphology or etymology can assist word memorization. Carter and McCarthy (1988, p. 14) point out that more memorable still would be words which are international

"loan" words such as telephone, radio, television, which have many close cognate forms in other languages.

Schouten-Van Parreren (1989), concentrating on reading with the primary goal of vocabulary acquisition, argues that a combination of three actions of inferring, verifying, and analyzing the meaning of each new word is very effective for this purpose. She defines guessing as differencing meaning of an unknown word from the context. The second action, which is the action of verifying the guess, is looking up words in a dictionary. The third action according to Schouten-Van Parreren comprises the recognition of the relationship between new words and already known words in the target language or the mother tongue. In spite of the fact that learners are recommended to learn words through reading texts, retention should not be confused with comprehension. Learning the word meaning implies more than comprehending it in a particular text during a reading activity. The meaning of a word has to be retained in the long-term memory.

Haycraft (1978), states that the words which are related to each other can be easily retained because using the meaning of words together with the whole meaning of the sentences in which they are embedded is the deepest level of processing and ensures the best retention.

To fulfill this aim, the researcher tried in his current study to facilitate learning by actively involving the learners in conscious efforts and deep mental processing through interacting with the IDV to remember new words effectively and for as long time as possible in the long-term memory by using different techniques of presenting new vocabulary and by relating words with pictures, videos and sounds.

2.3.17. Commentary :

In conclusion, vocabulary should be given a high profile in the syllabus and the classroom so that students can see its importance and understand that learning a language is not just about learning grammar (McCarten, 2007). It is indeed very necessary to help learners to acquire sufficient vocabulary for communication in the second language. The use of creative methods in teaching vocabulary enables the students to improve their word knowledge and continue to acquire more words outside formal classroom instruction. An efficient language teacher can use selected vocabulary activities according to the level of understanding and interest of the learners. There is no fixed or sure method to enhance the vocabulary of the EFL learners, but it is important

to implement appropriate techniques and teaching aids. Selecting the way of teaching vocabulary is based on the class situation and the learners' condition. Therefore, the chosen technique can attract the learners' attention and help them to achieve the learning aims.

Section (B) - Literature Review

4. Previous Studies

Section (B) discusses studies related to IDV strategy, studies related to reading comprehension and studies related to vocabulary and its retention.

2.4.1. (A) Studies related to IDV

Abu Sultan (2016)

Abu Sultan (2016) study aimed to identify the Effectiveness of an Interactive video in Developing compound skill performances in football at the high elementary stage. The study purposive sample consisted of (30) students of high elementary stage students from the northern Gaza education area. The researcher adopted two approaches, the descriptive approach and one sample (pre and posttest) quasi experimental approach.

The researcher prepared a list containing complex performance skills in football and determined four complex performances skills that are commensurate with the age of the study sample on which the study was applied. Then, an observation card of complex performance skills was derived. After the list was refereed by a panel of referees and experts,. The study was applied on a pilot study consisting of (30) elementary stage students other than the study sample so as to test the validity and reliability of the research tool. The researcher also prepared a cognitive test of the complex performance skills to collect data and find results. After statistical treatment, The results revealed that using interactive video signed progression in developing the complex performance skills in football.

Merkt & Schwan, (2014):

This study was concerned with identifying prerequisites for the successful use of interactive videos that offer different levels of interactivity. In a homework scenario, 64 ninth graders participated either in a search training demonstrating the efficient use of features facilitating the selection of relevant information or in a control training focusing on the integration of new information with prior knowledge. Following the training, the participants used either a common video that allowed them to control the transient flow of the information via stop and browsing or an enhanced video that additionally facilitated the localization of information via chapter selection and an index. Overall, the students wrote two essays (Essay 1: summary; Essay 2: argument)

and performed a search task. The study revealed that, independent of the training condition, students benefitted from the enhanced video for the search task which merely required naming isolated facts. Moreover, in a summary task, the enhanced video resulted in the consideration of information from more different chapters when the task required gathering information from the video; however, this broader consideration of chapters only translated into naming more information after the search training. The data of a second essay requiring inferences about the video's contents (argument) were not analyzed due to a floor effect. Taken together, these results indicate that the characteristics of a task as well as the students' knowledge of respective search strategies need to be considered when implementing interactive features in video environments.

Al Malki (2013)

This study aimed to investigate the impact of IDV in the development of listening comprehension skills. The researcher used two approaches, descriptive and experimental.

The descriptive one aimed to build a list of listening comprehension skills. And the experimental one to implement the experiment and determine the impact of IDV on the dependent variable. To do so the researcher selected a purposive sample of 60 students from 7th graders, 30 students for each group.

The researcher prepared an achievement test (post and pretest) in addition to an observation card to find results. The results were positive in favor of the experimental group and proved that IDV developed students' listening comprehension skills.

Ismail (2013)

This study investigated the effectiveness functional for interactive video to improve the skill of shooting a basketball with youngsters in the Gaza Governorates. The researcher used the quasi experimental approach as the research method. He selected a purposive sample consisted of (22) young students from UNRWA schools on Al-Burajj camp. The sample was divided into two groups, i.e. the experimental group consisted of (11) students, and a control group consisted of (11) students. IDV was used in teaching the experimental group, while the traditional method was used with the control one. The researcher used four different types of checklist to collect the needed data. He also prepared Physical and skill tests. The results of the instruments and

statistical treatment revealed that there was a significant improvement in the skill of shooting a basketball in favor of the experimental group which was taught by using IDV.

Hammond, Cherrett & Waterson (2013)

This study was conducted to examine the effects of interactive video as a complementary child pedestrian training activity. Two classes were randomly assigned to experimental and control groups, (50) children were divided into two groups. The experimental group consisted of (n=29) and the control group (n=21). The former using the interactive video, the latter not. Both groups had their roadside crossing abilities assessed at the start of the trial. The experimental group then played the interactive video. Both experimental and control groups were then re assessed at the roadside. All assessment was under the full supervision of an adult who was able to stop a child should a dangerous road crossing scenario present itself. The control group took part in exactly the same before and after assessments, but did not use the interactive video. By being engaged in an interactive video for between 20-30 minutes, the performance of the experimental group showed a statistically significant improvement . Wilcoxon Signed-ranks test suggested that there was a statistically significant difference at the 95% level ($p \Rightarrow .05$) between the experimental and control groups in favor of the experimental one.

Fadde, & Sullivan, (2013):

This study investigated the use of interactive video in teacher education as a way of laying the cognitive groundwork for developing teacher self-reflection. Two interactive video approaches were designed to help early pre-service teachers (novices) align what they observed in classroom teaching videos of other pre-service teachers with what experienced teacher-educators (experts) observed in the same videos. The first approach of video coding, based on qualitative research methods, required pre-service teachers to write their own observations when viewing short video clips before being shown the observations written by experts who had viewed the same clips. The novices then compared their observations to those of the experts before viewing and coding the next video clip. Both experts and novices coded the video clips, which came from a middle-school language arts class and an elementary mathematics class, for instances of classroom management and student questioning. The second approach of

guided video viewing involved pre-service teachers reading experts' written observations while viewing the same video clips used in video coding but not writing their own observations. On a written classroom observation posttest, the video viewing group performed better than the video coding group and significantly better than a no-video control group.

Matrood (2012)

The aim of the study was investigating the effect of using interactive video in acquiring the snatch-lift skill in weightlifting and its retention. The researchers adopted the experimental approach. The research sample consisted of (20) ninth graders from Hazhar Mokriani school in Duhok city, Iraq (2011-2012). The sample was divided into two groups, (10) for the experimental group taught by interactive video and (10) for the control group taught through the traditional method. The experiment lasted for (5) weeks, the videos included two units. To gain data, the researchers prepared a performance observation card and a retention test.

After statistical treatment, the researcher concluded that there was statistically differences between the two groups in favor of the experimental group. This means that IDVs were effective in helping students to acquire the snatch-lift skill in weightlifting. It also indicates the long-term effect of using interactive digital videos on skill retention of the experimental group.

Al-Aqra'a (2010)

This study sought to identify the impact of interactive video on skill performance and record level of the discus throwing skill. The study sampled 40 first-year students, at the Faculty of Physical Education and Sports at Al-Aqsa University, Gaza, in the second academic term, 2009- 2010. Employing the empirical method, the study sampled two 20-student groups, experimental "interactive video" and control "traditional lesson". The results revealed that the interactive video program significantly improved all variables in the experimental group as compared to the control group. The percentage of improvement were, swing phase 34.45, rotating phase 31.05, transition phase 33.05, and throwing phase 42.67; while the record level was 15.06. With regards to the control group, the percentage of improvement were, swing phase was 18.75, rotating phase 13.04, transition phase 8, and throwing phase 9.59, while the record level was 2.93.

Al Qarareah, Al Qasiy & Al Rafuh(2006)

The purpose of this study was to investigate the effect of interactive video on the development of scientific attitudes of 5th graders. The researcher adopted the quasi-experimental approach as the research method. He selected a purposive sample which consisted of (52) students divided into two groups, the experimental group consisted of (27) students and the control group consisted of (25) students. Data were collected using the following two instruments: interactive video for number of teaching situation contain (60) computer slide, a scientific attitudes scales which applied before and after the experiment .

To answer the question of the study, the researcher used analysis of (ANOVA) to level ($\alpha = 0.05$) of significance. The major findings of the study may be summarized as following: using the Interactive Video had greater effect on the development of scientific attitudes of the fifth graders than the traditional method.

Zhang, Briggs, Nunamaker & Zhou (2005):

This study examined the influence of interactive video on learning outcome and learner satisfaction in e-learning environments. To achieve this aim, the researcher recruited 138 undergraduate students from a large university located in the south-west of the United States. The students were divided into four experimental groups. The researchers used the LBA system as the e-learning environment to test their hypotheses. Four different settings were studied: three were e-learning environments—with interactive video, with non-interactive video, and without video. The fourth was the traditional classroom environment.

The study depended on random distribution of participants across treatments to balance out individual differences. Participants completed a preliminary survey two weeks before the experiment to provide their demographic information such as age, GPA, computer experience, and prior experience of e-learning.

As a main tool for the study, the researchers used pre and post achievement tests. After the posttest, each participant was required to fill out a questionnaire to assess his or her perceived satisfaction and to give feedback on the system and their learning experience. Results of the experiment showed that the value of video for learning effectiveness was contingent upon the provision of interactivity. Students in the e-learning environment that provided interactive video achieved significantly better learning performance and a

higher level of learner satisfaction than those in other settings. However, students who used the e-learning environment that provided non-interactive video did not improve either. The findings suggest that it may be important to integrate interactive instructional video into e-learning systems.

Schwan & Riempp (2004)

This study investigated the cognitive benefits of interactive videos. Thirty-six participants (eight female and 24 male students at the University of Offenburg, mean age 23) took part in the study. None of them had prior experience with the tying of nautical knots. They were paid for their participation. From a commercially available CD-ROM, four video clips were selected. Each video clip showed—framed in close-up—the hands of an actor demonstrating the tying of a specific nautical knot (see Fig. 1). Each video clip was purely visual, i.e. contained no spoken commentary nor sound and lasted between 14 and 35 s. Two experts rated the knots according to their difficulty. In ascending order of difficulty, the knots were double half hitch, cleat wind, anchor bend, and bowline. Based on the video clips, two different learning environments were realized. In the non-interactive environment, the video clips were presented in an all-or-nothing fashion. That is, the learner was free to view the respective clip as often as she wished, but she had to view it always completely from beginning to end at normal speed without the possibility of interruption. In contrast, in the interactive environment, the learner could interrupt the clip at will, change the speed of presentation from slow motion to normal speed to time-lapse and vice versa, and could also change the direction of presentation from forwards to backwards and vice versa.

After participants learned to tie four nautical knots of different complexity by watching either non-interactive or interactive videos. The results show that in the interactive condition, participants used the interactive features like stopping, replaying, reversing or changing speed to adapt the pace of the video demonstration. This led to an uneven distribution of their attention and cognitive resources across the videos, which was more pronounced for the difficult knots. Consequently users of non-interactive video presentations, needed substantially more time than users of the interactive videos to acquire the necessary skills for tying the knots.

Escalada & Zollman (1995):

The purpose of this study was to investigate the effects of using interactive digital video in a physic classroom on students' learning and attitudes. To achieve this aim, A total of 84 students consisting of 74 females and 10 males participant were distributed into six age groups. The researcher used a one group pre-test and post-test design to compare initial student computer attitude scale scores with final student computer attitude scale scores. A one group post-test design to compare student ratings of difficulty and of the activity across computer experience levels. A non-equivalent control group design to compare activity related final exam scores of students who participated in the activities with those who did not.

The results of the study demonstrate that interactive digital video materials can provide physics teachers with effective exploration and application activities that incorporate existing resources and the latest "user-friendly" technology to bring the "active" process of learning physics in their classroom.

Carroll, Bain, and Houghton.(1994)

This study sought to establish whether the use of interactive video improved the attention and comprehension of social behavior for children identified as having attention disorders. A total of 72 children with attentional difficulties were exposed to models of classroom social behavior using either linear video or interactive video. Two combinations, positive-neutral and positive-negative, were employed in order to establish whether the presentation of a positive with a negative model resulted in higher levels of attention and comprehension than the presentation of a positive-neutral model. The results of the study indicated statistically significant treatment effects for both attention and comprehension in favor of interactive video. This effect was consistent across both levels of the model type factor. The combination of a positive with a negative model resulted in higher levels of comprehension than a positive-neutral combination, confirming existing research using live models. The findings support the view that the increased user interaction associated with interactive video may result in higher levels of attention and comprehension of information when compared to linear video presentations of behavioral models, thus providing support for the application of interactive video to social skills training.

2.4.2. Comments on the previous studies (A)

The followings draw similarities and differences between this study and the previous ones :

1. Aims:

All the previous mentioned studies aimed at investigating the effect of using IDV (as an independent variable) on different dependent variables. All the studies reveled that IDV effected the dependent variables in favor of the experimental groups.

2. Methodology:

Similar to the researcher, Hammond, Cherrett & Waterson (2013), Matrood (2012), Al-Aqra'a (2010), Zhang, Briggs, Nunamaker & Zhou (2005), Schwan & Riempp (2004), Escalada & Zollman (1995) and Carroll, Bain, and Houghton.(1994) adopted the experimental approach.

Ismail (2013), Al Qarareah, Al Qasiy & Al Rafuh(2006) adopted the quasi experimental approach.

Abu Sultan (2016) and Al Malki (2013) adopted two approaches, the descriptive approach and one sample (pre and posttest) quasi experimental approach.

3. Samples:

The researchers of the previous mentioned studies used different kinds of samples. In the studies of Al Qarareah, Al Qasiy & Al Rafuh(2006), Abu Sultan (2016), Al Malki (2013), Ismail (2013), Al-Aqra'a (2010) the samples were chosen purposively. While in the studies of Hammond, Cherrett & Waterson (2013), Matrood (2012), Carroll, Bain, and Houghton.(1994), Zhang, Briggs, Nunamaker & Zhou (2005), Schwan & Riempp (2004), Escalada & Zollman (1995) the samples were chosen randomly.

4. Subjects

The previous studies targeted variety of samples, these samples included young learners, high school learners and college learners. The sample of Abu Sultan (2016), for instance, consisted of (30) students of high elementary stage students.

Merkt & Schwan, (2014) sample was (64) of ninth graders. Al Malki (2013) selected a (60) students from 7th graders, (30) students for each group.

Ismail (2013) sample also consisted of (22) young elementary students from UNRWA schools on Al-Buraij area. Hammond, Cherrett & Waterson (2013) selected (50) children who were divided into two groups. The experimental group consisted of (n=29) and the control group (n=21).

The research sample of Matrood (2012) consisted of (20) ninth graders from Hazhar Mokriani school in Duhok city, Iraq (2011-2012).

The study of Al-Aqra'a (2010) sampled 40 first-year students, at the Faculty of Physical Education and Sports at Al-Aqsa University.

Al Qarareah, Al Qasiy & Al Rafuh(2006) sample was (52) of fifth graders' divided into two groups, the experimental group consisted of (27) students and the control group consisted of (25) students.

Zhang, Briggs, Nunamaker & Zhou (2005) recruited 138 undergraduate students from a large university located in the south-west of the United States. The students were divided into four experimental groups.

On Schwan & Riempp (2004) study thirty-six participants (eight female and 24 male students at the University of Offenburg, mean age 23) took part in the study.

Escalada & Zollman (1995) Selected 84 students consisting of 74 females and 10 males participant were distributed into six age groups. And finally, Carroll, Bain, and Houghton.(1994)72 children with attentional difficulties.

5. Location:

The previous studies were applied in different countries. Those of Abu Sultan (2016), Ismail (2013) and Al-Aqra'a (2010) took place in Palestine. Merkt & Schwan, (2014) , Fadde, & Sullivan, (2013), Escalada & Zollman (1995), Carroll, Bain, and Houghton.(1994) and Zhang, Briggs, Nunamaker & Zhou (2005) were applied in USA. Al Malki (2013) located in KSA. Hammond, Cherrett & Waterson (2013) study took place in UK. While Matrood (2012) was applied in Iraq.

Al Qarareah, Al Qasiy & Al Rafuh(2006) was applied in Jordan. And the study of Schwan & Riempp (2004) located in Austria.

6. Tools:

The researchers used variety of instruments to achieve the goals of their investigations as follows:

Abu Sultan (2016) , prepared a list containing complex performance skills in football, an observation card of complex performance skills and a cognitive pre& posttest of the complex performance skills.

Escalada & Zollman (1995) prepared a pre and posttest whereas Al Malki (2013) prepared an achievement test (post and pretest) in addition to an observation card.

Ismail (2013) used four different types of checklist. He also prepared Physical and skill tests.

Hammond, Cherrett & Waterson (2013) & Fadde, & Sullivan, (2013) and Schwan & Riempp (2004)used observation cards and written classroom observation posttest.

Matrood (2012) and Al-Aqra'a (2010) both prepared a performance observation card but Matrood (2012) added a retention test.

Al Qarareah, Al Qasiy & Al Rafuh(2006) used a scientific attitudes scales.

Zhang, Briggs, Nunamaker & Zhou (2005) As a main tool for the study, the researchers used pre and post achievement tests and a questionnaire.

7. Statistical Treatments:

The Statistical treatments used in the previous studies to measure the results were varied and different. Most of them used T-test, Man Whitney, ANCOVA, One Way Anova and Size Effect and other Statistical measurements. In this study, the researcher utilized T-test, Means, Standard Deviations, Spearman Correlation, Split Half Technique, Kuder Richardson-20 equation and Holsti correlation, and SPSS.

8. Findings

All the above studies concerning the use of IDV agreed on the positive effectiveness of this technique on facilitating information transmission to learners' minds. All of them also confirm that IDV is an important tool to keep learners active in the learning process. These studies showed development in different fields. They all agreed that IDV is a learner centered technique which provides students a fruitful opportunity to choose how and when to learn and “what to do next”. In other words, IDV helps students to be more responsible for their learning. According to the studies, IDV is immersive and can

involve the learner in the content, it also enhances students' motivation and develops their thinking skills. In addition, it allows users to adapt their form and content according to their individual cognitive skills and needs. Most of the studies indicate that IDV improved learners' engagement and retention. To conclude, all the previously mentioned studies agreed that IDV has the power to pull students deeper into the material, making it more personal, flexible, and ultimately accountable for increasing learning outcomes.

2.4.3. (B) Studies related to reading comprehension

Bakheet (2016)

This study aimed at investigating the impact of using a website on 10th graders' English vocabulary, retention and reading skills. To achieve the study objectives , the researcher adopted the experimental approach on a purposive sample of (84) tenth graders from Osama Bin Zaid Secondary School for Boys those were randomly assigned to two equal groups: control and experimental group .

To achieve the study aims, the researcher used three instruments to gather data: a checklist for teachers to determine the most important five reading comprehension skills , a reading comprehension and vocabulary pre, post and retention test. The Website was used in teaching the experimental group, while the traditional method was used in teaching the control one in the first term of the scholastic year 2015-2016. The experiment lasted for five weeks during which the researcher implemented the experiment and the study tools to measure the effect of the use of the website on the study dependent variables.

The results showed that there were statistically significant differences at ($\alpha \leq 0.05$) between the scores of the control group and those of the experimental one on the reading comprehension posttest and the vocabulary of the study revealed that using the Website was effective in developing reading comprehension, vocabulary and its retention as they showed post and retention test in favor of the experimental group, which was attributed to the effectiveness of using the Website.

Maria, Noe & David (2016)

This study aimed at investigating how reading strategies do influence reading comprehension by English students of readings and conversation (I) as a foreign language. Since this research encompassed both qualitative and quantitative data in order to have a clearer understanding of the phenomenon under study, the researchers decided to use the mixed approach research since this involves the use of both quantitative and qualitative methods in a single study. For the purposes of this research, the study was qualitative.

The Research design was Non-experimental design. The Population included all the enrolled students from the four groups of Readings and Conversation (I) from the English Teaching Major at the FLD II/15.

The sample included Twenty-five percent of each of the four groups of Readings and Conversation I from the English Teaching Major at the FLD II/15 were selected by taking into consideration some of the researchers' criteria.

To gather the information required for this study, the researchers used the following instruments: An observational checklist, an interview and a test. The observational checklist was used to take notes and see the students' attitude, behavior and how reading strategies are used by them. Besides, the researchers selected a group of students from the class to be interviewed with semi-structured questions addressing their knowledge about reading strategies, their thought and opinion about the teacher's methodology towards the reading strategies, the way students developed reading skill to construct comprehension..

A test was conducted to measure the use of readings strategies. Students took this test twice, the first test was administered at the beginning of the course even if students did not know anything about reading strategies and the other was conducted at the end of the semester once students were exposed to the readings strategies. Therefore, the researchers made a comparison of the results to find out whether students were influenced by readings strategies or not. The participants were the enrolled students of the four groups of Readings and Conversation I semester II 2015.

The results of this test were analyzed through statistical analysis. the researchers found that these reading strategies could be more efficiently used as teaching aids so that educators can develop readings classes in an efficient way. Nonetheless, with these strategies educators can facilitate learners to become exceptional readers.

Nouri & Zerhouni (2016)

This study aimed at examining the relationship between two dimensions of vocabulary knowledge, namely size and depth, and whether these two dimensions of vocabulary correlate with reading comprehension performance. It also empirically evaluates the tests used to measure these three constructs in the Moroccan EFL context. To this end, 32 freshmen specializing in telecommunication engineering at the National Institute of Posts and Telecommunication in Rabat-Morocco and taking English classes were involved in the study. The instruments used include a) vocabulary size test, b) vocabulary depth test c) and reading comprehension test. The findings reveal a moderate correlation between size and depth of vocabulary knowledge, a significantly strong correlation ($p < .01$) between depth and reading comprehension performance, but

only a low correlation between vocabulary size and reading comprehension performance.

Abdal Rahim (2015)

This study aimed at investigating the effectiveness of KWL(Know,Want,Learn) strategy on Palestinian eleventh graders' reading comprehension, vocabulary and its retention and attitudes towards English. To achieve the study aims, the researcher adopted the experimental approach on a sample of (64) eleventh graders purposively chosen from Al Manfalouti Secondary School for Boys. The participants were divided into two equivalent groups: a control group consisting of (32) students and an experimental group consisting of another (32) students. The researcher used 5 instruments to achieve the study aims: 1) a checklist for teachers to determine the most important five reading comprehension skills, 2) a pre and post reading comprehension test, 3) a pre and post vocabulary test, 4) a delayed retention test, and 5) a pre and post attitude scale towards English language. The researcher used the KWL strategy in teaching the experimental group, while the traditional method was used in teaching the control one in the second term of the scholastic year 2013-2014. The experiment lasted for five weeks (2 lessons per week) in which the researcher implemented the study tools to investigate the effect of the strategy.

The results of the study revealed that the KWL strategy was effective in developing reading comprehension, vocabulary and its retention and in enhancing the attitudes of students towards English language.

Al Aila (2015)

This study aimed at examining the effectiveness of using scaffolding strategy on developing reading comprehension skills for the seventh graders at UNRWA schools in Gaza.

In order to achieve the aim of the study, the researcher adopted an experimental research design. The sample of the study which was purposefully chosen consisted of (63) students. The experimental group included (32) students taught reading comprehension by scaffolding techniques, while the control group included (31) students who were taught reading comprehension by an ordinary way. The experiment was conducted in the second term of the school year (2014-2015).

The researcher conducted a content analysis card to determine the reading comprehension skills in the content of *English for Palestine 7A pupil's book* and used Holsti's equation to count the reliability of the analysis. According to the result of the analysis, the researcher designed an achievement test. The validity of the test was refereed by the specialists and Pearson Correlation Coefficient, whereas the reliability of the test was measured by Kuder Richardson 20 equation and Split Half Technique. The results of the achievement test were statistically analyzed by using T-test Paired Sample to measure the differences in reading comprehension skills between the pre-test and the post-test of the experimental group. T-test Independent Sample was used to measure the differences in reading comprehension skills between the experimental group and control group in the post test. Furthermore, the effectiveness of scaffolding strategy was measured by "Effect Size" technique to ensure that the effect on the levels of the reading comprehension skills had not taken place accidentally. The results of the study indicated that there were statistically significant differences between the mean scores of the experimental group and those of the control group in favour of the experimental group.

Sanford (2015)

This study investigated factors affecting the reading comprehension of secondary students with disabilities. To understand the factors integral to reading comprehension, the researcher explored the relative importance of working memory, vocabulary, prior knowledge, word recognition, reading strategies, and motivation-to-read for the reading comprehension of secondary SWD. Participants were 158 SWD in grades 9 to 12 attending two large urban northern California high schools. Numerous instruments were used in this study to measure the seven constructs. Multiple regression analyses were conducted with the affective and cognitive variables both individually and jointly and, in order of importance, word recognition, vocabulary, reading strategies, working memory, and prior knowledge were found to influence the reading comprehension of secondary SWD. Of the motivation-to read factors, extrinsic motivation had a statistically significant negative relationship with reading comprehension indicating that internally motivated students had higher reading comprehension ability. Intrinsic motivation was also a significant contributor to reading comprehension when the affective factors were regressed onto reading comprehension.

Abu El- khair (2014).

This study aimed at investigating the impact of using videos on developing 8th Graders' reading comprehension skills in Gaza Governorate schools and their attitudes towards reading. The targeted reading comprehension skills were scanning, skimming, antonyms and synonyms, making inferences and taking notes. The researcher purposively chose a representative sample of (80) eighth graders from Al-Abass Prep "A" girls' school. The participants were divided into two equivalent control and experimental groups, each of which consisted of (40) students. The researcher used three study tools: a content analysis checklist for teachers to determine the five important reading comprehension sub-skills in the eighth grade English book, an achievement test (Pre & Post), and an attitude scale (pre & post) to measure the students' attitudes towards reading.

The results of the study revealed that videos were effective in developing the eighth graders' reading comprehension. In addition, the study findings confirmed that videos positively affected students' attitudes towards reading and videos.

Al Manyrawi (2013)

The study aimed at investigating the effectiveness of using written retelling strategy(WRS) on improving reading comprehension achievement and retention. the researcher adopted the quasi- experimental approach. The researcher purposively select a representative sample of (72) ninth graders from Amena Bent Wahab Secondary School for girls in Rafah. The participants were distributed into two equivalent groups, each of which consisted of (36) students. WRS was used in teaching the experimental group, while the traditional method was used with the control one during the second term of the school year (2011-2012).An achievement test was designed and validated to be used as a pre–post test. In addition, the researcher prepared an interview to investigate students' opinions towards the written retelling strategy as a new strategy in learning reading texts. The data of the study were analyzed by using T-test independent sample. Effect size technique was used to measure the effect size of written retelling strategy on the experimental group in each scope of the text. The results of the study revealed that the written retelling strategy was effective in improving reading comprehension achievement and retention.

Bhloul (2013)

This study investigated the effect of using differentiated instruction strategy on developing ninth graders' English reading comprehension skills at Gaza UNRWA

Schools. The researcher used two tools, a questionnaire to determine the degree of importance of the reading comprehension skills, an achievement test (Pre& post test) . The questionnaire was applied before the pre-test to identify the most important skills which will be used in the test. The researcher had benefited from the results of the questionnaire and the test. The targeted reading comprehension skills were prediction, skimming, scanning, guessing meaning from context and inference. The researcher purposively chose New Gaza Prep Boys "c" for the experiment and randomly chose two classes from the ninth grade classes. The sample of the study was 70 male students, (36) in the experimental and (34) in the control. Both groups were pre-tested to assure that they both were equivalent. The results were statistically analyzed to be compared with the post-test results. The results were statistically analyzed, using Statistical Package for Social Sciences (SPSS). The findings revealed that there were significant differences between the mean scores attained by the experimental group and those by the control group in favor of the experimental group in all skills. In the light of these results.

Ghorab (2013)

This study aimed to investigate the effectiveness of a suggested program based on picture reading strategy to develop seventh graders' English reading comprehension skills. The researcher used four tools: a checklist to determine the criteria of good picture which is suitable for reading comprehension texts for seventh graders, a questionnaire to determine the degree of importance of the reading comprehension skills, an achievement test (Pre& post-test) and the suggested program which consists of Teacher's Guide, Student's Book, teaching aids and evaluation tools.

The researcher purposively chose Nuseirat Prep "C" Boys School for applying an experiment to prove the effectiveness of using the strategy of reading pictures. The sample of the study was 60 male students, (30) students in each group. They were equally divided into two groups, experimental and control. Both groups were pre-tested to assure that they both were equivalent. The results were statistically analyzed by SPSS to be compared with the post-test results. The suggested program was taught to the experimental group while the control one was taught by the traditional method.

The findings revealed that there were significant differences between the mean scores attained by the experimental group and those by the control group in favor of the experimental group. This was due to picture reading strategy activation. The experiment showed the importance of activating picture reading strategy throughout reading.

Abed ElQader(2012)

This study aimed at investigating the effect of adapting computerized packages on developing reading skills for sixth graders at UNRWA schools in Gaza Governorates. To achieve the aim of the study, the researcher adopted the quasi- experimental approach .

The sample of the study consisted of (80) pupils who were randomly selected from EL Fakhoura Prep "B" Boys' School. The experimental group included (40) pupils and was taught by computerized packages, while the control group that included (40) pupils was taught reading skills by the ordinary method.

The researcher held a workshop to discuss the content of the package activities and suitable exercises for students' abilities to facilitate their learning and help them to develop their reading skills. The experiment was accomplished in two months during the second term of school year (2010/2011). An achievement test of reading skills with (25) items was designed and validated to be used as a pre and post-test to identify the direction of the size effect. Effect technique was used to measure the size effect of using computerized packages. After statistical treatment, the study indicated that there were statistically significant differences between the two groups in favor of the experimental one.

BÖLÜKBAŞ, KESKİN & POLAT (2011)

This study was carried out in order to identify the efficiency and the effects of cooperative learning techniques on the reading skills of the students who learn Turkish as a second language. Experimental research model consisting of pre-test, post-test with a control group was applied. Experimental group was taught through Ask Together - Learn Together, whereas control group was taught through traditional teaching methods which involve lecturing and question-response. A total of 40 students (20 subjects in experimental group, 20 subjects in control group), who learn Turkish as a second language at Istanbul University Language Center, participated in this study which was done in accordance with the 'pre-test post-test control group' model as one of the experimental research designs. In the experimental group, cooperative learning techniques were used for reading comprehension activities, while traditional teaching model was followed in the control group. The data were gathered through the 'Reading Comprehension Skills Achievement Test' developed by the researchers. The results

revealed that that cooperative learning is more effective in improving reading comprehension skills of learners who study Turkish as a foreign language when compared with traditional teaching methods.

Haboush (2010)

This study aimed at investigating the effectiveness of a suggested programme based on Multiple Intelligences (MI) theory on eighth graders' English reading comprehension skills. The targeted skills were skimming, scanning, making inferences, knowing the meaning of words through context and sequencing. To achieve this aim, the researcher employed a representative sample of 65 EFL male students studying at Az-Zaitoun Preparatory 'A' Boys' School which is run by UNRWA in the Gaza Strip.

The participants were divided into two equivalent groups: a control group, 32 students, and an experimental one, 33 students. Regarding the instrumentations, an achievement test and weekly quizzes, for the purpose of formative evaluation, were administered. Being used as a pre-test, the achievement test was meant to prove groups equivalence. Besides, it was used as a post test to measure any possible differences between the target groups. The collected data were analyzed and treated statistically through the use of SPSS.

The findings indicated that there were statistically significant differences between both groups, favouring the experimental one, only in skimming, scanning and knowing the meaning of words through context due to the programme implemented. Concerning the other remaining skills, no differences were observed. This was attributed to the fact that making inferences and sequencing are types of higher-order thinking skills that needed much more time to be mastered. It is also attributed to the bad psychological case the students had passed through because of a possible aggressive war on Gaza. It was also because students knew that the results of the post test would not be calculated and regarded in their school transcripts. Additionally, implementing the effect size equation, the study revealed that the programme had a medium effect size favouring the experimental group. Therefore, the findings are tentative waiting for other studies to be conducted in this regard. Taking into account this medium effect the findings showed.

Tarnofsky (2002)

The purpose of this study was to identify skills that differentiate good readers from poor readers with respect to comprehension when considered in relation to other variables. Skills included in the study were decoding, processing speed, sight vocabulary, short-term memory, free recall story retelling ability, vocabulary knowledge, deductive reasoning, context use in cloze passages, and awareness of strategies used in reading for comprehension. One-hundred-six 5th-grade students served as participants. A discriminant analysis was conducted with performance on a standardized measure of reading comprehension serving as the grouping variable and the selected component skills serving as the predictor variables. Results indicated that while all variables together discriminated significantly good and poor readers, decoding skill and reading strategy awareness best defined the discriminant function and thus appear to discriminate best good and poor readers with respect to comprehension.

2.4.4. Comments on the previous studies (B)

The above mentioned studies discussed reading comprehension skills as a dependent variable. Although they investigated the same dependent variable, they varied in terms of the independent ones. The followings draw similarities and differences between this study and the previous ones :

1. Aims :

All the previous mentioned studies aimed at investigating the effect of different independent variables on reading comprehension as a dependent variable.

2. Methodology:

Similar to the researcher, Bakheet (2016), Abdal Rahim (2015), Al Aila (2015), Abu El-khair (2014), Bhlool (2013), Ghorab (2013), BÖLÜKBAŞ, KESKİN & POLAT (2011), Haboush (2010) all adopted the experimental design, while Al Manyrawi (2013) & Abed ElQader(2012) used the quasi- experimental design.

The other remained studies of Tarnofsky (2002), Sanford (2015), Nouri & Zerhouni (2016), Maria, Noe & David (2016) adopted non-experimental (descriptive) design.

3. Samples:

The researchers of the previous mentioned studies used different kinds of samples. In the studies of Bakheet (2016), Abdal Rahim (2015), Al Aila (2015), Al Manyrawi (2013), Ghora (2013), Maria, Noe & David (2016), Tarnofsky (2002), Sanford (2015), Nouri & Zerhouni (2016), BÖLÜKBAŞ, KESKİN & POLAT (2011), the samples were chosen purposively. While in the studies of Abu El- khair (2014), Bhlool (2013), Abed ElQader(2012) the samples were chosen randomly.

4. Subjects

The previous studies targeted variety of samples, these samples included different ages. The sample of Bakheet (2016),for instance, consisted of of (84) tenth graders. In the study of Maria, Noe & David (2016), the participants were the enrolled students of the four groups of Readings and Conversation I semester II 2015.

The sample of Nouri & Zerhouni (2016) included (32) freshmen specializing in telecommunication engineering at the National institute of Posts and Telecommunication in Rabat-Morocco who were taking English classes.

The sample of Abdal Rahim (2015),included (64) eleventh graders. And the sample of Al Aila (2015) included (63) 7th graders.

In Sanford (2015) study the sample consisted of (158) participants from grades 9 to 12 attending two large urban northern California high schools.

Abu El- khair (2014) sample included (80) eighth graders from Al-Abass Prep "A" girls' school. And Al Manyrawi (2013) sample included (72) ninth graders from Amena Bent Wahab Secondary School for girls in Rafah. Whereas the sample of Bhlool (2013) was 70 maleof ninth graders.

The sample of Abed ElQader (2012) consisted of (80) sixth graders. Whereas the study of BÖLÜKBAŞ, KESKİN & POLAT (2011) consisted of 40 students who learn Turkish as a second language at Istanbul University Language Center.

Finally, the study of Haboush (2010) included 65 eighth graders. While the study of Tarnofsky (2002)included One-hundred-six 5th-grade student.

5. Location:

The previous studies were conducted in different countries. Those of Bakheet (2016), Abdal Rahim (2015), Al Aila (2015), Abu El- khair (2014), Bhlool (2013), Ghorab (2013), Haboush (2010), Abed ElQader(2012) & Al Manyrawi (2013) were carried out in Gaza-Palestine. Whereas Sanford (2015), Tarnofsky (2002) took place in USA. Maria, Noe & David (2016) took place in El Salvador, while Nouri & Zerhouni (2016) in Morocco and finally BÖLÜKBAŞ, KESKİN & POLAT (2011) took place in Turkey.

6. Tools:

Bakheet (2016) used three instruments to gather data: a checklist for teachers to determine the most important five reading comprehension skills , a reading comprehension and vocabulary pre, post and retention test.

Maria, Noe & David (2016) prepared An observational checklist, an interview and a test.

The instruments of Nouri & Zerhouni (2016) study included a vocabulary size test, a vocabulary depth test and reading comprehension test.

The study of Abdal Rahim (2015) included 5 instruments, 1) a checklist for teachers to determine the most important five reading comprehension skills, 2) a pre and post reading comprehension test, 3) a pre and post vocabulary test, 4) a delayed retention test, and 5) a pre and post attitude scale towards English language.

Al Aila (2015) conducted a content analysis card to determine the reading comprehension skills in the content of English for Palestine 7A and an achievement pre-post tests.

In Sanford (2015) study multiple regression analyses were conducted with the affective and cognitive variables both individually and jointly.

Abu El- khair (2014). used three study tools: a content analysis checklist for teachers to determine the five important reading comprehension sub-skills in the eighth grade English book, an achievement test (Pre & Post), and an attitude scale (pre & post) to measure the students' attitudes towards reading. While Al Manyrawi (2013) used an achievement test and an interview to investigate students' opinions towards the written retelling strategy as a new strategy in learning reading texts.

Bhlool (2013) used two tools, a questionnaire to determine the degree of importance of the reading comprehension skills, an achievement test (Pre& post test),

whereas Ghorab (2013) used four tools: a checklist to determine the criteria of good picture which is suitable for reading comprehension texts for seventh graders, a questionnaire to determine the degree of importance of the reading comprehension skills, an achievement test (Pre& post-test) and the suggested program which consists of Teacher's Guide, Student's Book, teaching aids and evaluation tools.

Abed ElQader(2012) prepared an achievement test of reading skills with (25) items was designed and validated to be used as a pre and post-test to identify the direction of the size effect. And Haboush (2010) & BÖLÜKBAŞ, KESKİN & POLAT (2011)

used only an achievement test as pre & posttest.

Finally, in Tarnofsky (2002) study a discriminant analysis was conducted with performance on a standardized measure of reading comprehension serving as the grouping variable and the selected component skills serving as the predictor variables.

7. Statistical Treatments:

The Statistical treatments used in the previous studies to measure the results were varied and different. Most of them used T-test, Man Whitney, ANCOVA, One Way Anova and Size Effect and other Statistical measurements. In this study, the researcher utilized T-test, Means, Standard Deviations, Spearman Correlation, Split Half Technique, Kuder Richardson-20 equation and Holsti correlation, and SPSS.

8. Findings

Most of the above mentioned studies focused on developing reading comprehension skills and sought to improve reading comprehension in English as foreign language. The researchers of these studies investigated the effect of different independent variables in developing reading comprehension skills. For example, Bakheet (2016) employed the website whereas Maria, Noe & David (2016) employed reading strategies. Abdal Rahim (2015) employed KWL(Know,Want,Learn) strategy and Al Aila (2015) employed scaffolding strategy. Abu El- khair (2014) employed videos while Al Manyrawi (2013) employed written retelling strategy(WRS). Bhlool (2013) employed differentiated instruction strategy and Ghorab (2013) employed a suggested program based on picture reading strategy. Abed ElQader(2012) employed a computerized packages whereas BÖLÜKBAŞ, KESKİN & POLAT (2011) cooperative

learning techniques. Haboush (2010) employed suggested programme based on Multiple Intelligences.

To sum up, the previous mentioned studies focused on determining the most effective reading skills that lead to text comprehension. They also listed many methods and strategies that may help to achieve comprehension. In addition, the previous studies aimed at finding solutions for difficulties in teaching reading comprehension.

2.4.5. (C) Studies related to vocabulary and its retention

Ihmaid (2017)

This study aimed at investigating the effectiveness of using SCRATCH applications in developing sixth graders' English vocabulary, its retention, and self-efficacy. To achieve this aim, the researcher adopted the experimental approach and recruited a sample of (44) EFL male learners studying at Bilal Ben Rabah Elementary School for Boys (A) in the middle area of Gaza Strip. The researcher chose two out of four classes in the school and

purposively assigned one class as the experimental group consisting of (22) students and the other as the control group consisting of (22) students. The traditional method was used in teaching vocabulary to the control group, while the scratch applications were used with the experimental one in the second term of the school year (2016-2017). As a main tool for the study, the researcher used an achievement test of four questions designed and validated to be used as pre- and post-test. The test was applied in the beginning to ensure the equivalence of the two groups' achievement levels and then it was applied as a posttest to detect any discrepancies attributable to using Scratch Applications. In addition, the researcher used the same test to measure the vocabulary retention after using scratch applications then a self-efficacy scale to investigate the level of self-efficacy beliefs to the students gained towards learning English in general and vocabulary in particular. The findings of the study revealed that there were significant differences in learning English vocabulary between the experimental and control groups in favor of the experimental group, and this was attributed to using scratch applications.

Al-Lahham (2016)

This study aimed at investigating the effectiveness of using keyword-based instruction on developing eighth graders' English vocabulary and its retention. To achieve the study aims, the researcher adopted the experimental approach in which he purposively selected a representative sample of (78) eighth graders from Al Shaheed Mohammed Addorra Basic School for Boys. The participants were distributed into two equivalent experimental and control groups: a control group consisting of (38) students and an experimental group consisting of other (40) students.

The researcher designed (8) lessons using keyword strategy which were used in teaching the experimental group, while the conventional method was used in teaching the control one during the second term of the school year (2015-2016). The researcher prepared an achievement test (pre, post & delayed) to collect data. The data of the study were analyzed using T-test Independent sample and T-test paired sample. Effect size technique was used to measure the effect size of keyword strategy on the experimental group. The findings of the study revealed that there were statistically significant differences between the mean scores attained by the experimental group and those attained by the control group in the post application of the vocabulary achievement test in favor of the experimental group due to the use of the keyword strategy in favor of the post application. Thus, the findings of the study revealed that the keyword strategy was effective in developing students' English vocabulary and its retention.

Bakheet (2016)

This study aimed at investigating the impact of using a website on 10th graders' English vocabulary, retention and reading skills. To achieve the study objectives, the researcher adopted the experimental approach on a purposive sample of (84) tenth graders from Osama Bin Zaid Secondary School for Boys who were randomly assigned to equal control and experimental group.

To achieve the study aims, the researcher used three instruments to gather data: a checklist for teachers to determine the most important five reading comprehension skills, a reading comprehension and vocabulary pre, post and retention test. The Website was used in teaching the experimental group, while the traditional method was used in teaching the control one in the first term of the scholastic year 2015-2016. The experiment lasted for five weeks during which the researcher implemented the experiment and the study tools to measure the effect of the use of the website on the study dependent variables.

The results showed that there were statistically significant differences at ($\alpha \leq 0.05$) between the scores of the control group and those of the experimental one on the reading comprehension posttest and the vocabulary of the study revealed that using the Website was effective in developing reading comprehension, vocabulary and its retention as they showed post and retention test in favor of the experimental group, which was attributed to the effectiveness of using the Website.

Abdal Rahim (2015)

This study aimed at investigating the effectiveness of KWL(Know,Want,Learn) strategy on Palestinian eleventh graders' reading comprehension, vocabulary and its retention and attitudes towards English. To achieve the study aims, the researcher adopted the experimental approach on a sample of (64) eleventh graders purposively chosen from Al Manfalouti Secondary School for Boys. The participants were divided into two equivalent groups: a control group consisting of (32) students and an experimental group consisting of another (32) students. The researcher used 5 instruments to achieve the study aims: 1) a checklist for teachers to determine the most important five reading comprehension skills, 2) a pre and post reading comprehension test, 3) a pre and post vocabulary test, 4) a delayed retention test, and 5) a pre and post attitude scale towards English language. The researcher used the KWL strategy in teaching the experimental group, while the traditional method was used in teaching the control one in the second term of the scholastic year 2013-2014. The experiment lasted for five weeks (2 lessons per week) in which the researcher implemented the study tools to investigate the effect of the strategy.

The results of the study revealed that the KWL strategy was effective in developing reading comprehension, vocabulary and its retention and in enhancing the attitudes of students towards English language.

Gang Ge (2015)

This study aimed at investigating the effectiveness of a storytelling approach in Chinese adult e-learners' vocabulary learning. Two classes of 60 students participated in the experiment, with 30 in the experimental group and 30 in the control group. The storytelling approach and the rote memorization approach were employed by the two groups respectively in one teaching session of 30 minutes. Two post-tests were administered to the two groups, with one completed immediately after the teaching and the other assigned three weeks later. A questionnaire survey was also assigned to the experimental group to obtain the learners' perceptions of the storytelling approach. The results of the data analysis showed that the storytelling method was more effective than rote memorization in both short-term retention and long-term retention, though its effects tended to diminish a little bit with time. Possible suggestions to perfect the method were given in the paper.

Washang (2013)

This study aimed at introducing videos to vocabulary building classes and measuring the subsequent effects it had on the level of word retention in ESP language learners. The 46 participants of the study were chosen from among the first year students of management based on their performance in the language section of the national exam for entering state universities in Iran, aka Konkoor; all of them scoring 35 to 40 out of 100. They were then divided into 2 groups randomly. Both groups attended classes for reading texts related to port management with special focus on the new vocabulary. The first class was treated with only texts and exercises. The second class was treated with the same texts and exercises with the addition of selected videos with the length of around 10 minutes, also related to port management and specially selected to contain and discuss the same vocabulary. At the end of the classes, which lasted 16 weeks, 2 tests were administered to measure the student ' level of word retention; one immediately after the end of the week 16 and the other 3 months after the first test. The results showed the second group performed significantly better in both tests.

El Kurd (2014)

The study aimed at investigating the effect of computerized educational songs on developing Palestinian 3rd graders' achievement in English vocabulary and structures and improving their motivation towards learning English. The researcher adopted the experimental approach to achieve his goals. He purposively chose (80) students; (40) in the control group and (40) in the experimental group. Thirteen songs were computerized to teach the experimental group while the students of the control group were taught using the traditional method. The researcher prepared four tools: a vocabulary achievement test, a structure achievement test, a questionnaire and an observation card. The study outcomes showed that computerized educational songs were effective in developing Palestinian 3rd graders' achievement in English vocabulary and motivation towards learning English. The study recommended using computerized educational songs in teaching English vocabulary.

El Farrah (2014)

The study examined the effectiveness of using smart boards in developing 10th graders' vocabulary achievement, retention and attitudes towards English. To achieve the study purpose, the study adopted the experimental approach by using two groups, (44)

students in the control group and (41) students in the experimental group. In order to collect data, the study used the following: an achievement test (pre-post & delayed), an attitude scale (pre & post) and a teacher's guide. The experiment lasted for (5) weeks. The study found that the smart board strategy was effective in developing 10th graders' vocabulary achievement, retention and attitudes towards English. The study recommended that teachers should be trained on using smart boards.

Nemati (2013)

This research attempted to investigate the impact of teaching vocabulary learning strategies on short-term and long-term retention of vocabulary items. The sample participants included 303 females randomly selected from one all-female governmental Pre-university school (PUC) in Iran. They were then divided into control and experimental groups and different proficiency levels. Researchers have generally equated the effect of instruction with its duration rather than its quality or intensity. The results obtained, through repeated measure ANOVA, revealed that strategy training could enhance long-term retention of vocabulary items significantly – the experimental group students outperformed the control group within the same period of instruction. Comparing different experimental proficiency groups, high proficiency level participants excelled their low and intermediate counterparts. Finally, from among different strategies “grouping” was proved to be an effective strategy for all proficiency level participants.

Zeller (2011)

This study examined vocabulary retention rates of 63 third grade students from low-income schools a year following instruction. Expressive labeling and decontextualized definition tasks were compared across years. Word knowledge on the decontextualized task went from 40% in second grade to 26% in third grade. Word knowledge on the expressive task went from 46% in second grade to 19% in third grade. Participants with high IQ scores (115 or higher) had superior retention rates especially for the expressive task. Participants with identified disabilities had lower retention rates than those without identified disabilities. Results indicated that this 15-minute supplement of vocabulary instruction was successful in increasing acquisition of

rather challenging vocabulary with participants retaining much of their learned vocabulary one year after instruction without review or practice.

Hall (2010)

Hall's (2010) dissertation investigated the importance of vocabulary development in kindergarten. The purpose of this study was to explore and describe how kindergarten teachers in 1 Midwestern U.S. suburban school district perceive and value the task of teaching vocabulary. The results were based on data collected from 2 focus group interviews and 8 follow-up 1-on-1 interviews from kindergarten teachers in the district. The teachers specified that vocabulary instruction does definitely exist in their classrooms. One significant finding was the acknowledgment by the core searchers that socioeconomic status is not a consideration for children's abilities to increase vocabulary capacity. There is no distinction in children's learning curve related to vocabulary between children who are poor or children who are wealthy.

These findings provide new information regarding learning and socioeconomic status. A child's ability for vocabulary knowledge and learning may not be based on the socioeconomic status of the family. This study also identified the teachers as their own resource for sources and programs to provide vocabulary instruction for their students instead of searching for teachers or curriculum specialists to assist them with strategies. The classroom kindergarten teacher has an innate sense and ability to create authentic vocabulary-rich environments that are indicative to the children they serve to promote vocabulary enhancement.

2.4.6. Comments on the previous studies (C)

The above mentioned studies discussed vocabulary and its retention as a dependent variable. Although they investigated the same dependent variable, they varied in terms of the independent ones. The following draw similarities and differences between this study and the previous ones :

1. Aims:

All the previous reviewed studies aimed at investigating the effect of different independent variables on vocabulary and its retention as a dependent variable.

2. Methodology:

The above mentioned studies used different designs and models.

Ihmaid (2017), Al-Lahham (2016), Bakheet (2016), Abdal Rahim (2015), Gang Ge (2015) Gang Ge (2015), El Kurd (2014), El Farrah (2014), Nemati (2013), Zeller (2011) (2014) all adopted the experimental approach whereas as Hall (2010) adopted the descriptive approach.

3. Samples:

The researchers of the previous mentioned studies used different kinds of samples. Ihmaid (2017), Al-Lahham (2016), Bakheet (2016), Abdal Rahim (2015), Gang Ge (2015) Gang Ge (2015), El Kurd (2014), El Farrah (2014), Zeller (2011) (2014) chose their samples purposively whereas Nemati (2013) chose his samples randomly.

4. Subjects

The previous studies targeted variety of samples, these samples included different ages.

Ihmaid (2017) sample, for instance, consisted of (44) EFL sixth graders. Al-Lahham (2016) sample included (78) eighth graders whereas the sample of Bakheet (2016) consisted of (84) tenth graders. Abdal Rahim (2015) sample consisted of (64) eleventh graders and Gang Ge (2015) consisted of (60) Chinese adult e-learners.

Washang (2013) collected (46) of first year university students. El Kurd (2014) sample included (80) 3rd graders and El Farrah (2014) sample included (41) tenth graders.

Nemati (2013) sample included 303 females from governmental Pre-university school (PUC) in Iran.

Zeller (2011) sample consisted of (63) third graders and finally the sample of Hall (2010) consisted of a number of kindergarten teachers.

5. Location:

The previous studies were applied in different countries. Those of Ihmaid (2017), Al-Lahham (2016), Bakheet (2016), Abdal Rahim (2015), El Kurd (2014) & El Farrah (2014), took place in Gaza - Palestine.

Nemati (2013) & Washang (2013) studies took place in Iran while the study of Gang Ge (2015) took place in China.

Finally, the studies of Zeller (2011) & Hall (2010) took place in USA.

6. Tools:

The researchers used variety of instruments to achieve the goals of their investigations as follows:

Ihmaid (2017), for example, used an achievement test of four questions designed and validated to be used as pre- and post-test. And he also used a self-efficacy scale to investigate the level of self-efficacy beliefs to the students gained towards learning English in general and vocabulary in particular.

Al-Lahham (2016), prepared an achievement test (pre, post & delayed) to collect data.

Bakheet (2016), used three instruments to gather data: a checklist for teachers to determine the most important five reading comprehension skills , a reading comprehension and vocabulary pre, post and retention test.

Abdal Rahim (2015), used 5 instruments to achieve the study aims: 1) a checklist for teachers to determine the most important five reading comprehension skills, 2) a pre and post reading comprehension test, 3) a pre and post vocabulary test, 4) a delayed retention test, and 5) a pre and post attitude scale towards English language.

El Kurd (2014), prepared four tools: a vocabulary achievement test, a structure achievement test, a questionnaire and an observation card, whereas El Farrah (2014) used an achievement test (pre-post & delayed), and an attitude scale (pre & post) and a teacher's guide.

Gang Ge (2015) prepared two post-tests and a questionnaire. In Washang (2013) study, two tests were administered to measure the students' level of word retention; one immediately after the end of the week 16 and the other 3 months after the first test. And finally Hall (2010) used interviews.

7. Statistical Treatments:

The Statistical treatments used in the previous studies to measure the results were varied and different. Most of them used T-test, Man Whitney, ANCOVA, One Way Annova and Size Effect and other Statistical measurements. In this study, the researcher utilized

T-test, Means, Standard Deviations, Spearman Correlation, Split Half Technique, Kuder Richardson-20 equation and Holsti correlation, and SPSS.

8. Findings

The above mentioned studies focused on the great importance of vocabulary in learning English as a foreign language. They have confirmed the important role that vocabulary plays in reading comprehension and in students' overall academic success. Moreover, the previous studies indicated that retention of vocabulary is very important. Additionally, The above mentioned studies demonstrated different methods to instruct vocabulary effectively. They also demonstrated factors and difficulties that affect vocabulary acquisition. The present study similarly investigated the role of IDV on developing students' vocabulary learning and retention

2.4.7. Summary

Chapter II handled the theoretical framework of the study, which were divided into three parts. The first part discussed IDVs while the second part tackled reading comprehension. The third part covered vocabulary and its retention.

Chapter II also reviewed the previous studies relevant to the subject of the current study and this expanded the researchers' background and broadened the subject of this study.

Chapter III

Methodology

Chapter III

Methodology

This chapter covers the procedures followed throughout the study. It introduces a complete description of the methodology of the study, the population, the sample, the instrumentation, the pilot study and the research design. Moreover, it introduces the statistical methods to be used to treat the data.

3.1 Type of research design:

To test the study hypotheses, the researcher will adopt the equivalent groups design (Experimental and Control groups) through selecting two similar groups and applying the experimental factor (independent variable) presented in interactive digital videos on the experimental group while the traditional method will be used with the control group.

The study includes five variables; the first two ones are independent variables : interactive digital videos and the traditional method. The other three are dependent variables including reading comprehension, vocabulary and vocabulary retention. The experiment lasted for five weeks. Both groups were taught by the same teacher, the researcher.

3.2 Population:

The population consisted of all sixth male graders in Gaza-west Governorate schools for the scholastic year 2016- 2017 whose number will be (807) according to the Ministry of Education records.

3.3 Sample:

The sample of the study consisted of (82) students distributed into two groups; the experimental group which consisted of (41) students and the control group which included (41) students. The sample of the study was chosen purposively from **Al-Motasem Bellah Elementary School for Boys**. The sample of the study was randomly selected from the school- sixth grade and divided equally into two groups, experimental group represented by (6/4) class and control group represented by (6/2) class.

Table (3.1) shows the distribution of the sample.

Table (3.1)

Sample distribution according to the groups

Group	Experimental (6/4)	Control (6/2)	Total
No. of a sample	41	41	82

Both groups were all in the first level aged nearly 11-12 years old. They were equivalent in their general achievement in accordance with the statistical treatment of their results in the first term exam of the scholastic year 2016 - 2017 and so, naturally, all classes were equivalent in their achievement as they were distributed according to their achievement in equivalent classes by the school administration beforehand. A pre-test was used to check the equivalence of achievement between the two groups.

3.4 The variables:

The study included the following variables:

1. The independent variables:

- Interactive digital video.
- Traditional method.

2. The dependent variables are reading comprehension, vocabulary and vocabulary retention.

3.5. Learning environment of IDV:

In this research, the researcher adopted the ADDIE model to design an IDV environment.



ADDIE is an instructional design model that guides the development process toward an end product that serves the needs of the learner as well as the teacher (Gagné, Wager, Golas, & Keller, 2005). ADDIE first appeared in 1975. It was created by the Center for Educational Technology at Florida State University. Its name is an acronym

of the capital letters of the five phases: (1) Analysis, (2) Design, (3) Development, (4) Implementation, and (5) Evaluation. (McGriff, 2000; Kaminski, 2007).

3.5.1 Analysis:

During analysis, the researcher identified students' needs , learners Characteristics, goals and objectives, some learning problems and existing knowledge.

The analysis phase progressed according to the following steps:

- 1.** Preparing the theoretical framework through reviewing the literature concerned.
- 2.** Deciding on the instruments of the study: a content analysis card, An achievement test and A checklist of reading comprehension skills.
- 3.** Designing a checklist of reading comprehension skills and introducing it to specialists, including professors of teaching methodology, supervisors of English language and experienced teachers.
- 4.** Preparing the pre-posttests and introducing them to specialists, including professors of teaching methodology, supervisor of English language and experienced teachers
- 5.** Conducting a pilot study to measure the test suitability to the study.
- 6.** Making sure that both groups were equivalent and then conducting the experiment.
- 7.** Designing the interactive digital videos and introducing it to specialists.
- 8.** Checking the validity and reliability of the tests.
- 9.** Recording and statistically analyzing the results.
- 10.** Implementing the experiment using interactive digital videos according to the plan on the experimental group while the control one was taught by the traditional one.
- 11.** Applying the post-test on the sample of the study and computing the results.
- 12.** Administering the delayed vocabulary test to the experimental group after two weeks of the experiment. The results were recorded and statistically analyzed.

3.5.2 Designing the interactive digital videos:

3.5.2.1 Aims of the IDV:

The general aim of the IDV was to improve the students' reading comprehension skills and develop their vocabulary.

3.5.2.2 preparing stage:

- a-** The researcher gathered information from various sources as surfing the net, reviewing literature, reading many books and references related to the present study.
- b-** These sources were helpful as they helped in designing and identifying the interactive digital videos objectives, content, resources, activities, techniques and evaluation.
- c-** The project was based on the use of the interactive digital videos as a teaching and learning tool supportive to the reading process.
- d-** The number of the experimental group was (41) sixth grade students.
- f-** The researcher made sure that all the students in the experimental group had a computer device before implementing the experiment.
- h-** The computer lab has (30) computers.
- i-** The researcher employed the (LCD) available in the computer lab.
- j.** The researcher prepared a CD for each student of the experimental group that contains interactive digital videos related to the targeted units to make use of at home.

3.5.2.3 Design stage:

- a.** At this stage, the researcher illustrated the specific objectives of the interactive digital videos. At the end of the lessons, students should be able to:
1. Make predictions about a reading text.
 2. Make inferences about a reading text.
 3. Develop awareness of synonyms and antonyms.
 4. Skim for gist or general impression of texts.
 5. Scan for specific information from texts.
 6. Recognize pronoun referents.
 7. Guess meaning of words from context
 8. Identify the main idea of a reading text.
 9. Remember words over time, be able to recall them readily.
 10. Be responsible for vocabulary expansion.

- b.** The interactive digital videos were used as a teaching and learning tool supportive to reading comprehension in teaching reading lessons in *English for Palestine 6*, second term (unit 13,15).
- c.** The researcher considered the students' levels and abilities.
- d.** The researcher prepared a teacher's guide (a lesson plan for each lesson). The lesson plan of each lesson purposely explicated and clarified the genuine classroom procedures and activities happening among the elements of the classroom environment such as the teacher, students, teaching and learning aids, procedures, and evaluation.
- e.** It also determined the role of each element of the learning environment as well as organizing the time among the activities. The lesson plan helped the teacher to progress effortlessly from one activity to another.
- f.** The content of the interactive digital videos was selected, arranged and modified according to the skills that students should acquire and improve. Also, the opinions and suggestions of a group of specialists including professors of teaching methodology, supervisors of English language in addition to highly qualified and experienced teachers of English language and technology were taken into account in selecting, arranging and changing the content of the interactive digital videos.
- g.** The researcher used some software programs in designing the program as: Articulate storyline2, Adobe Photoshop, Sound forg, Ulead video studio, Internet explorer, Microsoft Word, Pictures, sounds, movements and real videos are used in the design in order to activate the students' interest, attitudes, attention and understanding of the text. In addition, the researcher added related activities to each lesson so as to improve the reading comprehension skills.
- h.** The content of the interactive digital videos could be seen once students either played the Cd or downloaded on their own computer devices.
- i.** Moreover, the researcher added related activities and quizzes to each lesson and asked students to answer.
- j.** Then, the researcher introduced the interactive digital videos to the participants.
- k.** The researcher explained to students that the progress of videos and activities depends on their interaction with that materials.
- l.** The researcher moved around the students to follow up their work. However, he followed up students' interaction, comments, and feedback.
- m.** Individual differences among students were taken into account by varying the ways of introducing information and activities as well as using different learning and

teaching aids

- n.** The activities were gradually presented in terms of ease and difficulty.
- o.** The interactive digital videos were student-centered, and the teacher was a facilitator, guide and director.
- p.** At the end of the implementation stage, the researcher implemented the post reading and vocabulary achievement test.

3.5.3 Development:

3.5.3.1 Development Steps:

The researcher used Articulate storyline2 software to create his videos as follows:



1. Recorded different videos including presentations for the Cd as a guidance.
2. Converted the new targeted vocabulary from abstract forms into videos supported with pictures and sounds using image and video montage software (adobe photo shop, sound forg, Ulead video studio) .
3. Converted the new targeted reading texts into videos supported with pictures and sounds using image and video montage software (adobe photo shop, sound forg, Ulead video studio).
4. Prepared the interaction activates that will pop up and control the progress of the interactive videos.
5. Used Articulate storyline to gather the whole previous contents as one video material.

3.5.4 Implementation:

- a.** The researcher implemented pre achievement test as a diagnostic test in order to find out the weakness points students faced.
- b.** The researcher gave students a training session about how to use the interactive digital videos correctly in English vocabulary and reading skills .
- c.** The researcher employed students‘ center techniques as well as co-operative and collaborative learning . Participants were allowed to work in pairs, the researcher moved around the students to follow up students' work. However, he followed up students' interaction, comments, and feedback and assignments on the interactive digital videos .

- d.** The students were provided with immediate feedback from the researcher and their classmates .
- e.** Individual differences among students were taken into account by varying the ways of introducing information and activities as well as using different learning and teaching aids in addition to the interactive digital videos.
- f.** The activities were gradually presented in terms of ease and difficulty.
- g.** The activities presented a variety of questions dealing with and revealing the target reading skills.
- h.** The project was a student-centered, and the teacher was a facilitator, guide and director.
- i.** The researcher used three categories of interactions: student to teacher, student to student as well as student to the interactive digital videos.
- j.** In fact, the researcher managed to assign four school classes a week for teaching English vocabulary and reading skills . Each class period was (45) minutes.
- k.** At the end of the implementation stage, the researcher implemented the post reading and vocabulary achievement test to explore the progress in students' performance after intervention.

3.5.5 Evaluation:

We must keep in our mind that the use of technology does not replace the role of the teacher in the classroom. But it focuses on that the basic role of the teacher in the age of technology is a facilitator, a director and an evaluator of the educational process. Evaluation is defined as a systematic and organized process to collect and analyze information to determine the extent of achieving objectives specified for a certain semester, lesson, and training project. In addition, it indicates a judgment process or a qualitative or quantitative description of the degree or level of performance. Thus, evaluation is significant as it enables teacher to take a decision about student's performance. (AlNabhan: 2004:..38-39) .In this study, it was an activity planned to judge the advantages of IDV. It was used to assess the effect of IDV in terms of the benefits to the students. It was the process of gathering results to decide if IDVs were effective. The researcher used two types of evaluation as follows:

3.5.5.1 Formative Evaluation:

Al Nabhan (2004:43) states that formative evaluation is a diagnostic and an ongoing process aiming at ensuring the occurrence of the requested learning with the provision of feedback as well as improving the outcomes of both the learning and teaching processes. It indicates the quality and the level of the achievement to certain goals within a certain period of time. In addition, formative evaluation can be used to evaluate the effectiveness of a training program in the process of implementation and experimentation or to evaluate the efficacy of learning materials and teaching methods. It aims at giving data that helps in developing the program before being finished as well as it aids modifying, re-structuring, and developing the program before being used in the field. It also aims at developing measurement tools before being used in gathering data from the field.

In this study, formative evaluation aided the researcher to realize if the objectives were achieved in the formative stages of the experiment. It also helped the researcher to gather information to evaluate how to make IDVs improved. Therefore, the researcher carried out some activities and quizzes after every lesson in order to evaluate students' improvement in vocabulary and reading skills via the experiment.

3.5.5.2 Summative Evaluation:

Al Nabhan (2004: 44) mentions that summative evaluation aims at issuing a final judgment on the whole program, learning materials and the procedures followed in a program after being finished. It also aims at giving the final judgment on the program in terms of its validity for the future uses or for the purpose of replacing it or giving guidelines about how it can be applied in the future uses.

In this study, summative evaluation was employed at the end of the program. It aimed at examining the effect of using IDV as a teaching and learning tool supportive to the process reading and vocabulary approach on the development of the students' reading skills. The post- reading and vocabulary achievement test were used for this purpose. This was to provide an obvious illustration of the level of progress through the implementation of intervention bit by bit

3.5.6 Validity of the program

The researcher presented the program to a group of specialists; including professors of teaching methodology and technology, supervisors of English language in addition to highly qualified and experienced English and technology teachers in order to referee it program. The researcher modified the program according to their precious advice.

3.6. Instrumentation

The researcher used following instruments to achieve the aims of the

1. Content analysis card.
2. A reading comprehension skills checklist.
3. Reading comprehension test (Pre & post).
4. Vocabulary test (pre, post and retention).

3.6.1 Content Analysis card

3.6.1.1 Description of the Content Analysis

The researcher prepared a content analysis card of the reading comprehension texts of English for Palestine 6B. The analysis covered reading texts activities and tasks. The content analysis card included (24) items of reading comprehension skills assigned by the Ministry of Education. It is refereed by a panel of experts who reduced it to (22) items. The researcher covered all the units of English for Palestine 6B, focusing only on all the activities of the reading comprehension lessons (**Appendix 1**).

3.6.1.2 The Aim of the Content Analysis Card

The researcher used the content analysis card for collecting information and determining reading comprehension skills which are intended to be developed by using interactive digital videos throughout the study.

3.6.1.3 The Source of Designing the Content Analysis card

The researcher depended on different sources to construct the content analysis card:

- Reviewing literature and previous studies to decide on the most important reading comprehension skills for sixth graders.
- The opinions of teachers, supervisors and specialists..
- Ministry of Education Handbook.

3.6.1.4 Validity of the Content Analysis Card

Bynum (2001) defines validity as the suitability of the test in relation to what it is supposed to evaluate. It concerns the relevance and usefulness of what you are measuring. The content analysis card was evaluated by a panel of specialists, curriculum designers, methodologists, supervisors and sixth grade teachers to benefit from their comments and suggestions. They reviewed the instrument for its importance, clarity and appropriateness to English for Palestine 6 pupils' book. Their effective feedback benefited the researcher a lot through rating the degree of importance of the reading comprehension skills.

3.6.1.5 Reliability of the Content Analysis Card:

Harris & Hodges (1995) defines reliability as consistency in measurements and tests; specifically, the extent to which two applications of the same measuring procedure rank persons in the same way. Fraenkel and Wallen (1996) define reliability as the degree to which scores obtained with an instrument are consistent measures of whatever the instrument is measuring. The researcher uses Holsti's equation to count the reliability of the analysis through time and people.

$$CR = \frac{2R}{N1 + N2}$$

(CR) refers to the consistency; (R) refers to the number of the elements of the analysis agreed upon by the analyzers, (N1 & N2) refer to the elements of the analysis.

3.6.1.5.1 Reliability through time

The researcher repeated the analysis process of the units of English for Palestine- 6B pupil's book after two weeks to investigate the reliability of the content analysis. He used Holsti correlation to determine the reliability. Table (3.2) shows the points of agreement and disagreement between the analyses through time by the researcher.

Table (3.2)
Points of agreement and disagreement between the analyses through time

Analysis	First analysis	Second analysis	Agreement points	Difference points	Coefficient Correlation
	82	77	77	5	0.970

The researcher calculated the points of agreement and disagreement between the two analyses using Holsti's equation to count the reliability of the analysis through time. The

results show a strong correlation at (0.970), and this is a high consistency that allows the researcher to depend on the analysis results.

3.6.1.5.2 Reliability through people

To examine the reliability of the analysis process, the researcher asked for the cooperation of a 6th grade English teacher to re-analyze the content of the units of the 6B pupil's book. At first, the researcher applied the analysis card on a unit as a model with the teacher by analyzing the whole activities in the unit, then the teacher did the same process separately. The aim was to find out the correlation between the two results of the analyses for reliability.

The correlation between the researcher and the teacher was as it appears in Table (3.3). The researcher calculated the points of the agreement and disagreement between the two analyses. The consistency was (0.981) and that was a high consistency that allowed the researcher to depend on the analysis results which agree on the skills to be developed in the current study. Table (3.3) shows the points of agreement and disagreement between the analyses.

Table (3.3)
Points of agreement and disagreement between the analyses through people

Analysis	First analysis	Second analysis	Agreement points	Difference points	Coefficient Correlation
	82	79	79	3	0.981

3.6.2 Reading comprehension skills checklist

The reading comprehension skills checklist was prepared by the researcher based on reviewing related literature, previous studies, the teacher's guide to sixth grade English for Palestine students' book and the aims of the reading comprehension skills for the sixth grade highlighted in the Palestinian English Language Curriculum Document (1999).

3.6.2.1 The aim of the checklist

The checklist aimed at determining the most important reading comprehension skills for the sixth graders to be used in the pre and post achievement tests in order to assess the improvement in these targeted skills as a result of intervention.

3.6.2.2 Sources of the reading comprehension skills checklist

The researcher used the aims of the reading comprehension skills for the sixth grade as a reading comprehension skills checklist put forward by the Palestinian Ministry of Education for teachers and supervisors to choose the most important reading comprehension skills for tenth graders.

3.6.2.3 Description of the checklist

A checklist of 15 items was used in this study in order to rate the degree of importance of the most important reading comprehension skills for the sixth graders. Respondents were asked to rate each item of the reading comprehension skills as follows: (3) = very important, (2) = important, and (1) = slightly important.

3.6.2.4 Validity of the checklist

To test the validity of the checklist, the researcher consulted a group of specialists including supervisors of English, university professors, methodology experts, and qualified teachers of English whose comments were taken into consideration to referee the checklist.

3.6.2.5 Application of the checklist

The checklist was given to (4) English language supervisors and (13) expert teachers to rate the degree of importance of the most important reading comprehension skills for the sixth graders. After that, relative weight was calculated and the most important skills which got more than (90%) were chosen. The results showed that there were (6) important skills out of the (15) reading comprehension skills.

Table (3.4)

The most important reading comprehension skills

No.	Skill	Relative weight %
1.	Make predictions about content	93.91 %
2.	Skim texts for general meaning	94.75 %
3.	Scan texts for specific information	94.32 %
4.	Make inferences	92.61 %
5.	Recognize reference words	93.54 %
6.	Guessing meaning from context	92.01 %

3.6.3 Reading comprehension test

The reading comprehension test was prepared by the researcher to measure the students' achievement in the following six reading comprehension skills:

1) prediction, 2) scanning, 3) skimming, 4) inference, 5) recognize reference words, and 6) Guessing meaning from context. It was used as a pretest, applied before the experiment and as a posttest, applied after the experiment.

3.6.3.1 The aim of the reading comprehension test

The reading comprehension test aimed at measuring the impact of using interactive digital videos on developing reading comprehension skills for the 6th graders. The objectives of the test were to examine the students' ability to apply the above mentioned six skills.

3.6.3.2. The sources of constructing the reading comprehension test

The researcher referred to many resources in designing the test. In addition to his own experience, he depended on English for Palestine 6 textbook to construct the reading comprehension test. Furthermore, the researcher consulted English supervisors and experienced teachers.

3.6.3.3. Items of the reading comprehension test

Two reading comprehension passage were used in the pre-test. The passages were selected form the sixth graders students' book (English for Palestine 6), which is taught in the Palestinian schools. The passages were selected from the reading texts in unit 13, lesson 1, page 28 & unit 15, lesson 1, page 40. The items of the test were distributed into four main questions as follows:

1. A multiple choice exercise in which students are going to expect what the text is about and choose the correct answer form a-d. It consists of one item; one mark is given for the correct answer. **(Prediction)**.

2. A multiple choice exercise, in which students are going to read the passage and do the following:

- a) Flip through the first page fairly fast and choose the correct answer form a-d. It consists of one item; one mark is given for the correct answer. **(Skimming)**.

- b) Seek specific information in order to choose the correct answer form a-d. It consists of three items; one mark is given for each correct answer.
(Scanning).
- c) Determine certain items of language which have the property of reference and choose the correct answer form a-d. It consists of two items; one mark is given for each correct answer. **(Recognize reference words).**
- d) Go back to the passage ,reading the lines carefully , guessing the meaning of the given word from context order to choose the correct answer form a-d. It consists of one item; one mark is given for the correct answer. **(Guessing meaning from context)**
- e) Use clues from the text combined with readers' previous knowledge to find out about something that is not directly stated and choose the correct answer form a-d. It consists of one item; one mark is given for the correct answer.
(Inference).

3. A multiple choice exercise in which students are going to expect what the text is about and choose the correct answer form a-d. It consists of two items; one mark is given for each correct answer. **(Prediction).**

4. A multiple choice exercise, in which students are going to read the passage and do the following:

- a) Flip through the first page fairly fast and choose the correct answer form a-d. It consists of one item; one mark is given for the correct answer.
(Skimming).
- b) Seek specific information in order to choose the correct answer form a-d. It consists of three items; one mark is given for each correct answer.
(Scanning).
- c) Determine certain items of language which have the property of reference and choose the correct answer form a-d. It consists of two items; one mark is given for each correct answer. **(Recognize reference words).**
- d) Go back to the passage ,reading the lines carefully , guessing the meaning of the given word from context order to choose the correct answer form a-d. It consists of one item; one mark is given for the correct answer. **(Guessing meaning from context)**

- e) Use clues from the text combined with readers' previous knowledge to find out about something that is not directly stated and choose the correct answer form a-d. It consists of two items; one mark is given for the correct answer. **(Inference).**

3.6.3.4 The pilot study

The test was applied on a random sample of (37) students from **Al-Rafidain Elementary School**, who have the same characteristics of the sample of the study. The results were recorded and statistically analyzed to assess the validity and reliability of the test, as well as, the time needed. The items of the test were modified in the light of the statistic results

3.6.3.5 The validity of the test

Al Agha (1996, p.118) states that "a valid test is the test that measures what it is designed to measure". The study used the referee validity and the internal consistency validity .The study used the referee validity and the internal consistency validity.

3.6.3.6 The referee validity

The test was introduced to a jury of specialists in English language and methodology in Gaza universities, Ministry of Education and experienced supervisors.

3.6.3.7 The internal consistency validity

Al Agha (1996, p. 121) asserts that the internal consistency validity indicates the correlation of the score of each item with the total average of the test. It also indicates the correlation of the average of each domain with the total average. This validity was calculated by using Pearson Formula. Table (3.5) shows the correlation coefficient of every item of the reading achievement test.

Table (3.5)

Correlation coefficient of every item of the Reading comprehension test

No.		Pearson Correlation (item-domain)	Pearson Correlation (item-total)	No.		Pearson Correlation (item-domain)	Pearson Correlation (item-total)
1	Prediction	0.782**	0.634**	6	Recognize .words	0.720**	0.620**
10		0.801**	0.738**	7		0.592**	0.511**
11		0.828**	0.714**	16		0.563**	0.449**
2	Skimming	0.762**	0.587**	17		0.687**	0.701**
12		0.828**	0.641**	8	0.815**	0.517**	
3	Scanning	0.780**	0.635**	18	Guessing. meaning	0.785**	0.716**
4		0.582**	0.579**	9		0.896**	0.698**
5		0.691**	0.570**	19	Make inferences	0.817**	0.785**
13		0.831**	0.763**	20		0.691**	0.608**
14		0.565**	0.587**				
15		0.741**	0.611**				

*r table value at df (36) and sig. level (0.05) = 0.325

**r table value at df (36) and sig. level (0.01) = 0.418

The table shows that correlations of the test items were significant at (0.05, 0.01) which indicates that there was a consistency between the items and this means that the test was highly valid for the study.

Table (3.6)

Pearson Correlation coefficient for every skill in the Reading comprehension test

Skill	Pearson Correlation	Sig. level
Prediction	0.864	sig. at 0.01
Skimming	0.772	sig. at 0.01
Scanning	0.895	sig. at 0.01
Recognize .words	0.890	sig. at 0.01
Guessing. meaning	0.756	sig. at 0.01
Make inferences	0.869	sig. at 0.01

*r table value at df (36) and sig. level (0.05) = 0.325

**r table value at df (36) and sig. level (0.01) = 0.418

As shown in the table (3.6), there is a relation correlation between the scopes and the total degree and each scope with the other scopes at sig. level (0.01,0.05) that shows a high internal consistency of the vocabulary test, which reinforces the validity of the test.

3.6.3.8 Reliability of the test

The test is regarded reliable when it gives the same results in case of applying it again for the same purpose in the same conditions (Al-Agha, 1996:120). The reliability of the test was measured by the Spilt- half technique.

3.6.3.8.1 Split-Half Method

The reliability of the test was measured by KR20 and the Spilt- half techniques. Table (3.7) shows (KR20) and Split half coefficients of the reading achievement test.

Table (3.7)
(KR20) and Split half coefficients of the Reading comprehension test domains

	No. of items	KR20	Split half coefficients of the test domains
Total	20	0.921	0.935

The results showed that the Spilt-half coefficient is (0.935) and KR20 is (0.921) and this indicates that the reliability of the test was high and strong.

3.6.3.9 Analysis of the items of the reading comprehension test

3.6.3.9.1 Difficulty coefficient of the test

Difficulty coefficient is measured on the pilot study by finding out the percentage of the wrong answers of each item made by the students (Abu Nahia, 1994, p.308). The coefficient of difficulty of each item was calculated according to the following formula for the pilot study which counted (30):

$$\text{Difficulty Coefficient} = \frac{\text{No. of students who gave wrong answers}}{\text{the total number of students}} \times 100$$

Table (3.8)**Difficulty coefficient for each item of the Reading comprehension test**

No.	Difficulty coefficient	No.	Difficulty coefficient
1	0.55	11	0.65
2	0.35	12	0.60
3	0.50	13	0.45
4	0.55	14	0.45
5	0.75	15	0.45
6	0.55	16	0.40
7	0.35	17	0.55
8	0.45	18	0.70
9	0.60	19	0.65
10	0.55	20	0.45
Total difficulty coefficient		0.53	

Table (3.8) shows that the difficulty coefficient wobbles between (0.35 – 0.75) with total average (0.53), which means that each item is acceptable or in the normal limit of difficulty according view of point of assessment and evaluation specialist.

3.6.3.9.2 Discrimination coefficient:

That means that the test is able to differentiate between the high achievers and the low achievers. The discrimination coefficient was calculated according to the following formula:

$$\text{Discrimination Coefficient} = \frac{\text{No. of the student who has the correct answer from the high achievers}}{\text{No. of high achievers students}} - \frac{\text{No. of the student who has the correct answer from the low achievers}}{\text{No. of low achievers students}}$$

Table (3.9) show the discrimination coefficient for each item of the test:

Table (3.9)

Discrimination coefficient for each item of the Reading comprehension test

No.	Discrimination coefficient	No.	Discrimination coefficient
1	0.70	11	0.70
2	0.50	12	0.60
3	0.60	13	0.70
4	0.50	14	0.70
5	0.50	15	0.50
6	0.50	16	0.40
7	0.50	17	0.70
8	0.50	18	0.60
9	0.60	19	0.70
10	0.70	20	0.50
Total Discrimination coefficient			0.59

Table (3.9) shows that the discrimination coefficient wobbles between (0.40 – 0.70) with total average (0.59), which means that each item is acceptable or in the normal limit of discrimination according view of point of assessment and evaluation specialist.

3.6.4 Vocabulary test

The vocabulary test was prepared by the researcher to measure the students' achievement in vocabulary. It was used as a pre-test applied before the experiment, a posttest, which was also applied after the experiment and as a delayed vocabulary retention test applied three weeks after the post test.

3.6.4.1. The general aim of the test

The test aimed at measuring the impact of using interactive digital videos in developing the sixth graders' vocabulary and its retention in English language.

3.6.4.2. Sources of constructing the test

The researcher relied on "English for Palestine 6" textbooks to construct the vocabulary test. Furthermore, the researcher depended on his experience as a teacher of English. Moreover, the researcher consulted the English supervisors in the Directorate of Education, Gaza west Governorate and some colleague teachers. He also depended on a content analysis for two units (13-15) by which he draw out the new vocabulary intended to be taught. The test consisted of (35) items (See Appendix2).

3.6.4.3. Items of the test

The items of the test are distributed into six main questions as follows:

1- Complete the following by using a suitable word from the box.

This question included ten items which evaluated students' ability to choose words according to context. One mark was given to each correct answer. Students had to read the words from the box and then use them to complete the sentences.

2- Match the words with their pictures .

This question includes five items, which evaluate the pupils' ability in matching words with their pictures correctly, by writing the letter of the correct word next to related picture above. A mark was given for each one.

3- Write each word in the box next to its meaning below.

This question included five items which evaluated students' ability to match words with their definitions. Students had to read the words and the definitions to match them with the appropriate ones. One mark was given to each correct answer.

4- Match the words in the box below with their opposites.

This question includes five items which evaluated students' ability to match words with their antonyms correctly by writing a word from the given box next to its antonym. A mark was given to each one

5- Circle the correct answer.

This question includes four items, which evaluate the pupils' ability to distinguish between similar words. A mark is given for each one.

6- Classify the words in the box so as they go under their fields.

This question includes six items, which evaluate the pupils' ability to classify words according to category. A mark is given for each one.

3.6.4.4 The pilot study

The test was applied on a random sample of (37) students from **Al-Rafidain Elementary** , who have the same characteristics of the sample of the study. The results were recorded and statistically analyzed to assess the validity and reliability of the test, as well as, the time needed. The items of the test were modified in the light of the statistical results.

3.6.4.5 The validity of the test

Al Agha (1996, p.118) states that "a valid test is the test that measures what it is designed to measure". The study used the referee validity and the internal consistency validity .The study used the referee validity and the internal consistency validity.

3.6.4.6 The referee validity

The test was introduced to a jury of specialists in English language and methodology in Gaza universities, Ministry of Education and experienced supervisors.

3.6.4.7 The internal consistency validity

Al Agha (1996, p. 121) asserts that the internal consistency validity indicates the correlation of the score of each item with the total average of the test. It also indicates the correlation of the average of each domain with the total average. This validity was calculated by using Pearson Formula. Table (3.10) shows the correlation coefficient of every item of the writing achievement test.

Table (3.10)

Correlation coefficient of every item of the Vocabulary test

No.		Pearson Correlation (item-domain)	Pearson Correlation (item-total)		No.	Pearson Correlation (item-domain)	Pearson Correlation (item-total)
1	Complete	0.651**	0.462**	Match2	1	0.766**	0.673**
2		0.699**	0.582**		2	0.587**	0.590**
3		0.699**	0.651**		3	0.764**	0.602**
4		0.632**	0.502**		4	0.384**	0.387*
5		0.644**	0.578**		5	0.772**	0.575**
6		0.699**	0.689**	Circle	1	0.723**	0.521**
7		0.719**	0.632**		2	0.640**	0.594**
8		0.740**	0.651**		3	0.727**	0.532**
9		0.742**	0.663**		4	0.622**	0.590**
10		0.599**	0.359*		1	0.533**	0.740**
1	Match1	0.726**	0.638**	Classify	2	0.875**	0.732**
2		0.738**	0.629**		3	0.818**	0.734**
3		0.695**	0.603**		4	0.864**	0.720**
4		0.725**	0.587**		5	0.793**	0.705**
5		0.605**	0.495**		6	0.765**	0.679**
1	Write	0.806**	0.699**				
2		0.750**	0.673**				
3		0.563**	0.587**				
4		0.736**	0.630**				
5		0.763**	0.676**				

*r table value at df (36) and sig. level (0.05) = 0.325

**r table value at df (36) and sig. level (0.01) = 0.418

The table shows that correlations of the test items were significant at (0.05, 0.01) which indicates that there was a consistency between the items and this means that the test was highly valid for the study.

Table (3.11)**Pearson Correlation coefficient for every domain in the Vocabulary test**

Skill	Pearson Correlation	Sig. level
Complete	0.842**	sig. at 0.01
Match1	0.830**	sig. at 0.01
Write	0.904**	sig. at 0.01
Match2	0.843**	sig. at 0.01
Circle	0.827**	sig. at 0.01
Classify	0.875**	sig. at 0.01

*r table value at df (36) and sig. level (0.05) = 0.325

**r table value at df (36) and sig. level (0.01) = 0.418

As shown in the table (3.11), there is a relation correlation between the scopes and the total degree and each scope with the other scopes at sig. level (0.01,0.05) that shows a high internal consistency of the Reading comprehension test which reinforces the validity of the test.

3.6.4.8 Reliability of the test

The test is regarded reliable when it gives the same results in case of applying it again for the same purpose in the same conditions (Al-Agha, 1996, p.120). The reliability of the test was measured by the Spilt- half technique.

3.6.4.9 Split-Half Method

The reliability of the test was measured by KR20 and the Spilt- half techniques (Guttman equation used “unequal – length”). Table (3.12) shows (KR20) and Split half coefficients of the Writing achievement test.

Table (3.12)**(KR20) and Split half coefficients of the Vocabulary test domains**

	No. of items	KR20	Split half coefficients
Total	35	0.950	0.941

The results showed that the Spilt-half coefficient is (0.941) and KR20 is (0.950) and this indicates that the reliability of the test was high and strong.

3.6.4.10 Analysis of the items of the vocabulary test

3.6.4.10.1 Difficulty coefficient of the test

Difficulty coefficient is measured on the pilot study by finding out the percentage of the wrong answers of each item made by the students (Abu Nahia, 1994:308). The coefficient of difficulty of each item was calculated according to the following formula for the pilot study which counted (30):

$$\text{Difficulty Coefficient} = \frac{\text{No. of students who gave wrong answers}}{\text{the total number of students}} \times 100$$

Table (3.13)

Difficulty coefficient for each item of the Vocabulary test

No.	Difficulty coefficient	No.	Difficulty coefficient
1	0.35	19	0.45
2	0.45	20	0.40
3	0.40	21	0.35
4	0.35	22	0.45
5	0.40	23	0.55
6	0.40	24	0.45
7	0.40	25	0.35
8	0.35	26	0.40
9	0.35	27	0.55
10	0.35	28	0.50
11	0.45	29	0.45
12	0.65	30	0.50
13	0.70	31	0.55
14	0.70	32	0.55
15	0.50	33	0.50
16	0.55	34	0.45
17	0.50	35	0.70
18	0.60		
Total difficulty coefficient		0.47	

Table (3.13) shows that the difficulty coefficient wobble between (0.35 – 0.0) with total average (0.47), that mean that each item is acceptable or in the normal limit of difficulties according view of point of assessment and evaluation specialist.

3.6.4.10.2 Discrimination coefficient:

That means that the test is able to differentiate between the high achievers and the low achievers. The discrimination coefficient was calculated according to the following formula:

$$\text{Discrimination Coefficient} = \frac{\text{No. of the student who has the correct answer from the high achievers}}{\text{No. of high achievers students}} - \frac{\text{No. of the student who has the correct answer from the low achievers}}{\text{No. of low achievers students}}$$

Table (3.14) show the discrimination coefficient for each item of the test:

Table (3.14)

Discrimination coefficient for each item of the Vocabulary test

No.	Discrimination coefficient	No.	Discrimination coefficient
1	0.30	19	0.50
2	0.30	20	0.40
3	0.40	21	0.70
4	0.30	22	0.50
5	0.40	23	0.50
6	0.40	24	0.30
7	0.40	25	0.70
8	0.50	26	0.40
9	0.50	27	0.50
10	0.30	28	0.40
11	0.50	29	0.70
12	0.70	30	0.60
13	0.60	31	0.70
14	0.60	32	0.70
15	0.40	33	0.60
16	0.70	34	0.70
17	0.40	35	0.60
18	0.60		
Total Discrimination coefficient			0.51

Table (3.14) shows that the discrimination coefficient wobbles between (0.30 – 0.70) with total average (0.51), which means that each item is acceptable or in the normal limit of discrimination according view of point of assessment and evaluation specialist.

3.7 Controlling the variables

The researcher tried to control some variables that might affect the results of the research to ensure valid results and avoid any possible external interference. Mackey and Gass (2005, p.128) emphasized that "it would be important that each group of students be relatively homogeneous. Were they not homogeneous, one cannot be sure about the source of the results".

3.7.1. General English achievement variable:

T-test was used to measure the statistical differences between the groups due to their English and general skills. The subjects' results in the second term test of the school year (2016-2017) were recorded and analyzed as shown in Table (3.15) below.

Table (3.15)
T-test results of controlling English skills variable

Domains	group	N	Mean	Std. Deviation	t	Sig. value	sig. level
English achievement	experimental	41	19.805	11.028	0.888	0.377	not sig.
	control	41	17.829	9.030			

“t” table value at (80) df. at (0.05) sig. level equal 2.00

“t” table value at (80) df. at (0.01) sig. level equal 2.66

Table (3.15) shows that there were no statistical differences at (0.05) between the experimental and the control subjects due to the English skills variable.

3.7.2. Controlling the reading test variable

To make sure that the sample subjects are equivalent in their previous English language skills, the researcher applied a pre reading test. The results of the subjects were recorded and statistically analyzed using T-test. Table (3.16) shows the mean and the standard deviation of each group in the pre reading achievement test. The results analysis indicates that there are no statistical significant differences between the experimental and the control groups at (0.05) level.

Table (3.16)
T. test results of controlling reading test variable

Scope	group	N	Mean	Std. Deviation	t	Sig. value	sig. level
Prediction	experimental	41	0.415	0.591	-0.174	0.862	not sig.
	control	41	0.439	0.673			
Skimming	experimental	41	0.341	0.530	-0.412	0.681	not sig.
	control	41	0.390	0.542			
Scanning	experimental	41	1.024	0.758	0.131	0.896	not sig.
	control	41	1.000	0.922			
Recognize .words	experimental	41	0.659	0.693	0.879	0.382	not sig.
	control	41	0.512	0.810			
Guessing. meaning	experimental	41	0.293	0.461	-0.390	0.698	not sig.
	control	41	0.341	0.656			
Make .inferences	experimental	41	0.488	0.779	0.297	0.767	not sig.
	control	41	0.439	0.709			
SUM	experimental	41	3.220	1.620	0.292	0.771	not sig.
	Control	41	3.122	1.400			

“t” table value at (80) d f. at (0.05) sig. level equal 2.00

“t” table value at (80) d f. at (0.01) sig. level equal 2.66

3.7.3. Controlling the vocabulary test variable

To make sure that the sample subjects are equivalent in their previous English language achievement, the researcher applied a pre vocabulary test. The results of the subjects were recorded and statistically analyzed using T-test. Table (3.17) shows the mean and the standard deviation of each group in the pre vocabulary achievement test. The results analysis indicates that there are no statistical significant differences between the experimental and the control groups at (0.05) level.

Table (3.17)
T. test results of controlling vocabulary test variable

Scope	group	N	Mean	Std. Deviation	t	Sig. value	sig. level
Complete	experimental	41	1.902	0.800	1.755	0.083	not sig.
	control	41	1.585	0.836			
Match1	experimental	41	0.976	0.570	1.275	0.206	not sig.
	control	41	0.805	0.641			
Write	experimental	41	0.854	0.727	-0.310	0.758	not sig.
	control	41	0.902	0.700			
Match2	experimental	41	0.902	0.800	1.687	0.096	not sig.
	control	41	0.610	0.771			
Circle	experimental	41	0.512	0.675	-0.359	0.721	not sig.
	control	41	0.561	0.550			
Classify	experimental	41	0.732	0.837	-0.120	0.905	not sig.
	control	41	0.756	0.994			
SUM	experimental	41	5.878	2.400	1.252	0.214	not sig.
	Control	41	5.220	2.361			

“t” table value at (80) d f. at (0.05) sig. level equal 2.00

“t” table value at (80) d f. at (0.01) sig. level equal 2.66

3.8.4. Age variable

The researcher recorded the students' ages from the school files for the scholastic year (2016-2017) and made sure that they were all of the same age ranging between [11-12] years old which in turn indicates that both the experimental and the control groups were equivalent in the age variable.

3.8 Statistical analysis procedures

The data was collected and computed by using Statistical Package for Social Sciences (SPSS). The following statistical techniques were used:

1. T. Test Independent Samples: to control the intervening variables and to measure the statistical differences in means between the two groups due to the study variables.
2. T. Test Paired Sample to measure the differences in the total average score between the post vocabulary test and that of the delayed vocabulary retention test of the experimental group.
3. Spearman correlation: to determine the internal consistency validity of the test.
4. Pearson correlation coefficient to identify the correlation of the test items.
5. Split-half and Alpha Kronbach techniques were used to test the reliability of the test and the attitude scale items.
6. The significance level used was 0.05.

3.9 Summary

This chapter outlined the procedures of designing and applying the instruments, the participants and the statistical analysis that the researcher adopted in analyzing the results of the pre-post reading and delayed vocabulary test. The next chapter presents the data analysis and results of the study questions and hypotheses.

Chapter IV

Results: Data analysis

Chapter IV

Results: Data analysis

The study aims at investigating **The Effectiveness of Using Interactive Digital Videos on Developing Sixth Graders' English Reading Skills and Vocabulary learning and Retention**. This chapter tackles the findings of the study in light of research questions. The researcher used different statistical tests using the statistical program (SPSS) to analyze the collected data results. Tables were also used to present these data with analysis and interpretation.

4.1.Data Analysis

4.1.1 Answer to the first question

The first question was formulated as follows:

What are the main reading skills intended to be developed among sixth graders using interactive digital videos?

To answer such question, The researcher prepared a content analysis card of the reading comprehension texts of English for Palestine 6B. The goal of this card was to determine the reading comprehension skills which are intended to be developed by using interactive digital videos throughout the study (**See Appendix 1**).

After that, the researcher prepared a reading comprehension skills checklist. The checklist aimed at determining the most important reading comprehension skills for the sixth graders (**See Appendix 1**).

The results showed that there were (6) important skills out of the (15) reading comprehension skills as follows:

1. Make predictions about content.
2. Skim texts for general meaning.
3. Scan texts for specific information.
4. Make inferences.
5. Recognize reference words.
6. Guessing meaning from context.

Chapter II(section B) includes information about each skill in detail.

4.1.2 Answer to the second question

The second question was formulated as follows:

What are the main vocabulary items intended to be developed among sixth graders using interactive digital videos?

To determine the main vocabulary items intended to be developed among sixth graders using interactive digital videos, the researcher made use of the content analysis of 6th grade pupil's book(second semester). The results of the analysis detected fifteen new vocabulary items in unit (13), and sixteen new vocabulary items in unit (15).

These vocabulary items are presented in details in (Appendix 1).

4.1.3 Answer to the third question

The third question was formulated as follows:

What are the main characteristics and the structure of the interactive digital videos that can be used in teaching reading and vocabulary to sixth graders?

The definition of IDV presented by the researcher in chapter II (section A) draws the most important characteristics of IDV. The researcher indicated that IDV is a digital multimedia presentation that can take users' input to perform some actions. Such type of multimedia incorporates a wide variety of interactive elements directly into the video itself, including hotspots, questions, calculations and more. These videos play like common videos, however they include hotspots and clickable areas, that perform an action when clicking on them. Chapter II(section A) includes information about each skill in detail.

4.1.4 Answer to the fourth question

The fourth question was formulated as follows:

Are there statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group and that of the control group in the post reading comprehension test?

To answer this question, the researcher tested the following null hypothesis:

There are no statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group and that of the control group in the post reading comprehension test.

To examine the first hypothesis, means and standard deviations of both groups' results on the post-test were computed. Independent Samples T-test was used to measure the significance of the differences. Table (4.1) describes those results.

Table (4.1)

T. test independent sample results of differences between the experimental and the control group in the post reading achievement test

scope	group	N	Mean	Std. Deviation	t	Sig. value	sig. level
Prediction	experimental	41	2.341	0.883	4.093	0.000	sig. at 0.01
	control	41	1.537	0.897			
Skimming	experimental	41	1.268	0.708	4.190	0.000	sig. at 0.01
	control	41	0.634	0.662			
Scanning	experimental	41	3.902	1.934	5.206	0.000	sig. at 0.01
	Control	41	1.878	1.568			
Recognize .words	experimental	41	2.659	1.175	4.754	0.000	sig. at 0.01
	Control	41	1.488	1.052			
Guessing. meaning	experimental	41	1.488	0.637	7.105	0.000	sig. at 0.01
	Control	41	0.488	0.637			
Make .inferences	experimental	41	2.146	0.989	3.683	0.000	sig. at 0.01
	Control	41	1.341	0.990			
SUM	experimental	41	13.805	4.875	6.760	0.000	sig. at 0.01
	Control	41	7.366	3.666			

“t” table value at (80) d f. at (0.05) sig. level equal 2.00

“t” table value at (80) d f. at (0.01) sig. level equal 2.66

As shown in table (4.1) the T. computed value is larger than T. table value in the test, which means that there are significant differences at ($\alpha \leq 0.01$) in the total average score of the post-test between the experimental and control group in favor of the experimental group. The mean of the post-test in the experimental group reached (13.805), whereas the mean of the control group was (7.366). Concerning the means of domains, the highest value was (3.902) whereas the lowest one was (1.268), the means of the other domains came between these two values. This result indicates that using **interactive digital videos** is more effective than the traditional method in developing the students' **reading comprehension** skills.

To show the extent of **interactive digital videos** effect on the experimental group achievement in the **reading comprehension** skills, the study applied the "Effect Size" technique (Affana, 2000, p. 42). The researcher computed " η^2 " using the following formula:

$$\eta^2 = \frac{t^2}{t^2 + df}$$

And "d" value using the following formula:

$$d = \frac{2t}{\sqrt{df}}$$

Table (4.2)

The Table References to Determine the Level of Size Effect (η^2) and (d)

Test	Effect volume		
	Small	Medium	Large
η^2	0.01	0.06	0.14
d	0.2	0.5	0.8

The results of " η^2 " and "d" values shown in Table (4.2) indicate a large effect size of using **interactive digital videos** strategy in the post test

Table (4.3) shows the effect size of **interactive digital videos** strategy of the reading achievement skills test.

Table (4.3)

The Effect Size of interactive digital videos strategy on the Experimental group in the Post-Test

Skill	t value	η^2	d	Effect volume
Prediction	4.093	0.173	0.915	Large
Skimming	4.190	0.180	0.937	Large
Scanning	5.206	0.253	1.164	Large
Recognize .words	4.754	0.220	1.063	Large
Guessing. Meaning	7.105	0.387	1.589	Large
Make .inferences	3.683	0.145	0.823	Large
Total	6.760	0.364	1.512	large

Table (4.3) shows that the effect size of interactive digital videos strategy is large on students' reading comprehension skills. This means that the effect of interactive digital videos is significant. This large effect may be due to the activities and techniques which are used in the interactive digital videos strategy to develop students' reading achievement skills.

4.1.5 Answer to the fifth question

The fifth question was formulated as follows:

Are there statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group and that of the control group in the post vocabulary test?

To answer this question, the researcher tested the following null hypothesis:

There are no statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group and that of the control group in the post vocabulary test.

To examine the second hypothesis, means and standard deviations of both groups' results on the post-test were computed. Independent Samples T-test was used to measure the significance of the differences. Table (4.4) presents those results.

Table (4.4)

T.test independent sample results of differences between the experimental and the control group in the post vocabulary achievement test

scope	group	N	Mean	Std. Deviation	t	Sig. value	sig. level
Complete	experimental	41	5.317	4.292	2.737	0.008	sig. at 0.01
	control	41	3.171	2.607			
Match1	experimental	41	4.024	1.651	2.942	0.004	sig. at 0.01
	control	41	2.902	1.800			
Write	experimental	41	3.244	1.985	4.307	0.000	sig. at 0.01
	control	41	1.537	1.583			
Match2	experimental	41	3.171	1.883	2.756	0.007	sig. at 0.01
	control	41	2.049	1.802			
Circle	experimental	41	2.463	0.840	5.755	0.000	sig. at 0.01
	control	41	1.317	0.960			
Classify	experimental	41	4.171	2.428	4.572	0.000	sig. at 0.01
	control	41	2.195	1.327			
SUM	experimental	41	22.390	11.097	4.496	0.000	sig. at 0.01
	control	41	13.171	7.021			

"t" table value at (80) d f. at (0.05) sig. level equal 2.00

"t" table value at (80) d f. at (0.01) sig. level equal 2.66

As shown in table (4.4) the T. computed value is larger than T. table value in the test, which means that there are significant differences at ($\alpha \leq 0.01$) in the total average score of the post-test between the experimental and control group in favor of the experimental group. The mean of the post-test in the experimental group reached (22.390), whereas the mean of the control group was (13.171). Concerning the means of domains, the highest value was (5.317) whereas the lowest one was (2.463), the means of the other domains came between these two values. This result indicates that using **interactive digital videos** strategy is more effective than the traditional method in developing the students' **vocabulary**.

Table (4.5) shows the effect size of **interactive digital videos** strategy of the **vocabulary** achievement.

Table (4.5)
The Effect Size of interactive digital videos strategy on the Experimental group in the Post-Test

Skill	t value	η^2	d	Effect volume
Complete	2.737	0.086	0.612	Large
Match1	2.942	0.098	0.658	Large
Write	4.307	0.188	0.963	Large
Match2	2.756	0.087	0.616	Large
Circle	5.755	0.293	1.287	Large
Classify	4.572	0.207	1.022	Large
total	4.496	0.202	1.005	large

Table (4.5) shows that the effect size of interactive digital videos strategy is large on students' vocabulary achievement. This means that the effect of interactive digital videos is significant. This large effect may be due to the activities and techniques which are used in the interactive digital videos strategy to develop students' reading achievement skills.

4.1.6 Answer to the sixth question

The sixth question was formulated as follows:

Are there statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group subjects in the post vocabulary test and that of the delayed vocabulary retention test?

To answer this question, the researcher tested the following null hypothesis:

There are no statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group subjects in the post vocabulary test and that of the delayed vocabulary retention test.

To investigate the hypothesis, the means and standard deviations of the experimental group results were computed. T. Test Paired Sample was used to measure the significance of the differences.

Table (4.6)

T. Test paired sample results of the differences between the posttest and the delayed test of the experimental group in vocabulary test

scope	group	N	Mean	Std. Deviation	t	Sig. value	sig. level
Complete	post test	41	5.317	4.292	4.367	0.000	sig. at 0.01
	Delayed test	41	6.317	3.489			
Match1	post test	41	4.024	1.651	0.829	0.412	not sig.
	Delayed test	41	4.098	1.428			
Write	post test	41	3.244	1.985	2.919	0.006	sig. at 0.01
	Delayed test	41	3.537	1.675			
Match2	post test	41	3.171	1.883	4.189	0.000	sig. at 0.01
	Delayed test	41	3.659	1.682			
Circle	post test	41	2.463	0.840	2.685	0.011	sig. at 0.05
	Delayed test	41	2.780	0.936			
Classify	post test	41	4.171	2.428	2.685	0.011	sig. at 0.05
	Delayed test	41	4.488	2.111			
SUM	post test	41	22.390	11.097	6.084	0.000	sig. at 0.01
	Delayed test	41	24.878	9.693			

“t” table value at (40) d f. at (0.05) sig. level equal 2.02

“t” table value at (40) d f. at (0.01) sig. level equal 2.70

Table (4.6) shows that the T. computed value is larger than T. table value in the test, which means that there are significant differences at ($\alpha \leq 0.01$) in the total average score except second score of the post-test of the experimental group in favor of the delayed test. The mean of the post-test reached (22.390), whereas the mean of delayed-test was (24.878). This means that there are statistically significant differences between the post and delayed application of the experimental group in favor of the delayed test. This result indicates the long-term effect of using **interactive digital videos**. on the vocabulary retention of the experimental group.

Table(4.6) also shows , that the T. computed value is smaller than T. table value in the **Match1**, which means that there are no significant differences at ($\alpha \leq 0.01$) in the **Match1** score of the post-test and the delayed test of the experimental group. The mean of the post-test reached (4.098), whereas the mean of pre-test was (4.024). This means that using **interactive digital videos** is not effective in the achievement of sixth graders' **Match1** score. The researcher traced the possible reasons behind such result, and found that students of both groups got similar high marks by having correct answers since such question is one of their favorites. Matching the word with its suitable picture is an enjoyable exercise that students really like to answer.

Table (4.7)
The effect size of interactive digital videos strategy in the post- and delayed test of the experimental group

Scope	t value	η^2	d	Effect volume
Complete	4.367	0.323	1.381	Large
Write	2.919	0.176	0.923	Large
Match2	4.189	0.305	1.325	Large
Circle	2.685	0.153	0.849	Large
Classify	2.685	0.153	0.849	Large
TOTAL	6.084	0.481	1.924	Large

Table (4.7) shows that the effect size of interactive digital videos strategy is large on students' vocabulary. This means that the effect of interactive digital videos strategy is significant.

4.1.7 Answer to the seventh question

The seventh question was formulated as follows:

Are there statistically significant differences between the mean scores of the experimental group subjects and that of the control group in the delayed vocabulary retention test?

To answer this question, the researcher tested the following null hypothesis:

There are no statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group subjects and that of the control group in the delayed vocabulary retention test

To investigate the hypothesis, the means and standard deviations of the experimental group results were computed. Independent Samples T-test was used to measure the significance of the differences.

Table (4.8)

T.test independent sample results of differences between the experimental and the control group in the delayed vocabulary achievement test

scope	group	N	Mean	Std. Deviation	t	Sig. value	sig. level
Complete	experimental	41	6.317	3.489	4.626	0.000	sig. at 0.01
	control	41	3.171	2.607			
Match1	experimental	41	4.098	1.428	3.303	0.001	sig. at 0.01
	control	41	2.951	1.702			
Write	experimental	41	3.537	1.675	5.398	0.000	sig. at 0.01
	control	41	1.634	1.513			
Match2	experimental	41	3.659	1.682	4.161	0.000	sig. at 0.01
	control	41	2.122	1.661			
Circle	experimental	41	2.780	0.936	6.708	0.000	sig. at 0.01
	control	41	1.463	0.840			
Classify	experimental	41	4.488	2.111	6.010	0.000	sig. at 0.01
	control	41	2.195	1.229			
SUM	experimental	41	24.878	9.693	6.187	0.000	sig. at 0.01
	control	41	13.537	6.619			

“t” table value at (80) d f. at (0.05) sig. level equal 2.00

“t” table value at (80) d f. at (0.01) sig. level equal 2.66

As shown in table (4.8) the T. computed value is larger than T. table value in the test, which means that there are significant differences at ($\alpha \leq 0.01$) in the total average score of the delayed-test between the experimental and control group in favor of the experimental group. The mean of the delayed-test in the experimental group reached (24.878), whereas the mean of the control group was (13.805). This result indicates the

long-term effect of using **interactive digital videos** on the vocabulary retention of the experimental group. This result also reveals the loss of retention of the control group as a result of using the traditional method in teaching them.

4.2 Summary

This chapter dealt with the study data analysis. The results of each hypothesis were statistically analyzed using different statistical techniques. The results of the first three hypothesis were descriptive .

The results of the fourth hypothesis showed differences of statistical significance between the experimental and the control one in the post application of the reading skills achievement test in favor of the experimental group. The results of the fifth hypothesis indicated significant differences between the two groups in the post application of vocabulary achievement test in favor of the experimental group. The results of the sixth hypothesis indicated significant differences between the post vocabulary test and the delayed vocabulary retention test of the experimental group in favor of the delayed one.

The results of the seventh hypothesis indicated significant differences between the two groups in the delayed test in favor of the experimental group.

In the next chapter, the researcher will discuss and interpret the results before drawing some conclusions and putting forward some suggestions and recommendations.

Chapter V
Findings, Discussion,
Conclusion, Implications
and Recommendations

Chapter V

Findings, Discussion, Conclusion, Implications and Recommendations

This chapter discusses the results of the study. It also summarizes the findings and induces the pedagogical implications from the study results. In addition, it involves suggestions and recommendations for further studies. Such suggestions are expected to be beneficial for course designers, English teachers of tenth grade, supervisors, students and educators. They could help improve teaching English language in general and reading comprehension, vocabulary and its retention in particular.

5.1 Findings

Based on the findings of this study, the following results were observed:

1. There are statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group and those of the control group in the post reading comprehension test in favor of the experimental group.
2. There are statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group and those of the control group in the post vocabulary test in favor of the experimental group.
3. There are statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group subjects in the post vocabulary test and those of the delayed vocabulary retention test in favor of the delayed test.
4. There are statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group subjects and those of the control group in the delayed vocabulary retention test in favor of the experimental group.

5.2 Discussion

This current study aimed at investigating the impact of using interactive digital videos on Palestinian sixth graders' reading comprehension, vocabulary and its retention. So, the experiment was designed to determine if using the IDVs would develop the students' reading comprehension and if it would increase their vocabulary and if they would retain it longer. Based on the findings of this study, the results showed that using IDVs had a significant effect on the students' levels of reading comprehension skills, vocabulary and its retention. Following is a more detailed discussion of the study findings.

5.2.1 Discussion in Relation to the Study First Hypothesis

The researcher investigated the first hypothesis, which examined if there were statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group on the reading comprehension posttest and those of the control group. The results indicated that the T. computed value (6.76) was larger than T. table value (2.00) in the test, which means that there were statistically significant differences at ($\alpha = 0.05$) in the total mean score of the posttest between the experimental and control groups in favor of the experimental group, which learned by IDVs.

There was also a statistically significant difference between the means of both groups in favor of the experimental group. The mean of the experimental group was (13.8), whereas the mean of the control group was (7.3). In addition, the researcher found that the effect size of IDVs was large in the total scores of the reading comprehension posttest which indicated that the effect of using IDVs was statistically significant.

This large effect can be attributed to the activities, techniques, the suitability of different and various teaching aids used in the IDVs which aimed at developing reading comprehension skills ,vocabulary and retention. Furthermore, these results can be attributed to the effectiveness of the IDVs as it positively affected both students' affective and cognitive domains. Concerning the affective domain, the IDVs was practiced through the PCs and Cds which provided students with multimedia advantages. Any piece of information a student studied was accompanied by interaction, sound, movement, pictures and colours. These advantages of multimedia seemed to have provoked students' interests and motivation. Consequently, a motivated student can learn easier than other less motivated students. In addition, IDVs provides different resources of information in different contexts. Multimedia aided learning is reported to be beneficial in many disciplines, including foreign language learning (Miller, 1998; Trollip & Alessi, 1988; Tsou, Wang, & Li, 2002). The study results related to the first question indicated that using IDVs is more effective than the traditional method in developing students' reading comprehension skills.

Similarly, the finding of investigating this question was in agreement with the findings of the most of the previous studies such as those of Abu Sultan (2016), Al Malki (2013), Ismail (2013), Hammond, Cherrett & Waterson (2013), Fadde, P. & Sullivan, P. (2013), Matrood & Mohammed (2012), Al-Aqra'a (2010), Al Qarareah, Al Qasiy & Al Rafuh(2006), Zhang, Briggs & Zhou (2005), Schwan & Riempp (2004),

Escalada & Zollman (1995), Carroll, Bain, and Houghton.(1994), which indicated that IDV had an effective and significant improvement in students' achievement, interest and motivation.

5.2.2. Discussion in Relation to the Study Second Hypothesis

The researcher investigated the second hypothesis, which examined if there were statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group on the vocabulary posttest and those of the control group. The results concerning this hypothesis indicated that the T. computed value (4.49) was larger than T. table value (2.00) in the test, which means that there were significant differences at ($\alpha = 0.05$) in the total mean score of the posttest between the experimental and control groups in favor of the experimental group, which learned by IDVs.

There was also a statistically significant difference between the means of both groups in favor of the experimental group. The mean of the experimental group was (22.39) , whereas the mean of the control group was (13.17). In addition, the researcher found that the effect size of website was large in the total scores of the vocabulary posttest. which indicated that the effect of using IDVs was significant. This large effect can be attributed to the use of the IDVs.

All the above mentioned results indicate that using IDVs was more effective than the traditional method in developing students' vocabulary skills. The researcher attributed this result to the fact that using IDVs with the experimental group raised their interactivity and participation as well as their motivation to learn, which in its turn raised their enjoyment and love for using IDVs in learning vocabulary. This also positively reflected on their achievement towards English vocabulary.

This large effect can be attributed to the activities, techniques and the variety of teaching aids used in IDVs which aimed at developing vocabulary. Consequently, a motivated learner can learn easier than other less motivated students. In addition, IDVs provide different resources of information in different contexts.

Moreover, the experimental group students were asked to interact with the computers through working out some computer activities which provided them with immediate feedback about their answers instead of the traditional paper and pencil activities which students do not like as they may cause boredom and embarrassment for them. In addition, they took the responsibility of their learning and the practiced active learning.

They felt that their role was more central and important compared to the tradition way of teaching learning process.

Additionally, the findings were in agreement with the findings of all the previous studies such as Al Qarareah, Al Qasiy & Al Rafuh(2006), Zhang, Briggs & Zhou (2005), Schwan & Riempp (2004), Escalada & Zollman (1995), Carroll, Bain, and Houghton.(1994), Also, Abu Sultan (2016) and Ismail (2013) revealed that the experimental group scored higher than the control group.

5.2.3. Discussion in Relation to the Study third Hypothesis

The researcher investigated the third hypothesis, which examined if there were statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group in the vocabulary posttest and vocabulary delayed retention test. The results concerning this question indicated that the T. computed value (6.08) was larger than T. table value (2.70) in the test, which means that there were statistically significant differences at ($\alpha \leq 0.05$) in the total mean scores of the experimental group between the vocabulary posttest and vocabulary delayed retention test in favor of the retention test.

The mean of the vocabulary posttest was (22.39), whereas the mean of the delayed vocabulary retention test was (24.87).

The mean score of the delayed (retention) test was larger, which could be due to the administration of the test three times, which in its turn had some impact on the students. Also it could be due to the fact that the students got a personal CD for each of them which contains the IDVs. Such reason gave the student an extra opportunity to benefit from the CD contents and helped them to come over their previous mistakes.

These findings were in agreement only with the study of Matrood (2012), who investigated the effect of using interactive video in acquiring the snatch-lift skill in weightlifting and its retention. The results of the study proved the long-term effect of using interactive digital videos on skill retention of the experimental group.

5.2.4. Discussion in Relation to the Study fourth Hypothesis

The researcher investigated the fourth hypothesis, which examined if there were statistically significant differences at ($\alpha \leq 0.05$) between the mean scores of the experimental group subjects and that of the control group in the delayed vocabulary retention test. The results concerning this question indicated that the T. computed value

(6.18) was larger than T. table value (2.00) in the test, which means that there were significant differences at ($\alpha = 0.05$) in the total mean score of the delayed retention test between the experimental and control groups in favor of the experimental group, who learned by IDVs. The mean of the experimental group was (24.8) , whereas the mean of the control group was (13.5). These results indicate the loss of retention of the control group as a result of using the traditional method in teaching. On the other hand, The result indicates the long-term effect of using **interactive digital videos**. on the vocabulary retention of the experimental group.

These findings were in agreement only with the study of Matrood (2012). who investigated the effect of using interactive video in acquiring the snatch-lift skill in weightlifting and it's retention. The results of the study proved the long-term effect of using interactive digital videos on skill retention of the experimental group.

5.3. Study Conclusions

Based on the findings derived from this study, the following conclusions were drawn:

1. Students were clearly more engaged in learning with IDVs than the traditional way as the IDVs were more interesting and draw their attention longer.
2. Using the IDVs increased the students' interaction in class as it was a new technology for them and very easy to use.
3. Using IDVs improved the teacher's instruction.
4. Using IDVs saved a lot of time and effort.
5. Using IDVs increased the variety of techniques used in the lessons, which reduced students' boredom.
6. Using IDVs also increased students' motivation and involvement in the classroom.
7. Using IDVs were suitable for all types of students.
8. Using IDVs were easy to use in presenting the lessons.
9. Using IDVs considers the individual differences among learners with its various activities and techniques that are suitable for all ages and students.

5.4. Pedagogical implications

In the light of the study results, the following suggestions are put forward:

1. Using IDVs in teaching encourages the students to be active and motivated when doing an activity.
2. Teachers should be aware of the importance of IDVs in developing students' reading comprehension skills.
3. Using IDVs develops students' vocabulary and its retention.
4. Using IDVs develops students' reading comprehension skills.
5. Using IDVs is suitable for normal and even disabled learners and also for all ages.
6. IDVs instruction provides students with immediate feedback and different types of reinforcement.
7. IDVs present a unique opportunity to combine a wide range of effective instructional practices in one activity, integrating technology, scaffolding, collaborative learning, critical thinking, authentic assessment and constructivism, all in one seamless bundle.
8. English teachers should be aware of the importance of the technology as a teaching and learning tool in developing students' language.
9. Using IDVs enables students to develop positive attitudes towards learning in general and English in particular.
10. Students feel relaxed and motivated when using IDVs as IDVs takes into consideration the individual differences among themselves, so teachers should be aware of their students' needs and abilities in order to include appropriate activities that go in harmony with students' abilities.
11. Using IDVs makes students get interested in the target subject because it enhances and increases their motivation through the use of various activities and techniques which lead to improving students' achievement. Also, this diversity creates a suspense element within students and captures their attention.

5.5. Recommendations

In the light of the study results, the researcher provides recommendations for curriculum designers and decision makers, school administrators and supervisors, teachers of English, students, as well as recommendations for further research.

5.5.1. Recommendations for curriculum designers and decision makers

The researcher suggests the following recommendations to the curriculum designers and decisions makers due to the great role they play in activating the methods of teaching:

1. Developing teacher's abilities in teaching English by holding training courses to motivate the use of innovative strategies like IDVs.
2. Decreasing the number of the students in the classroom to enable teachers to care for individual differences among students and implement modern technology in teaching .
3. Modifying the system of assessment and evaluation in the schools to suit the use of IDVs.
4. Taking into account of new methods in teaching English for Palestine depending on the interactive learning environment such as IDVs.
5. Providing the syllabus with autonomous learning strategies and activities using IDVs-based learning environment in order to get students learn independently at home.

5.5.2. Recommendations to school principals and supervisors

The researcher recommends the following for school administrators and supervisors:

1. Providing teachers with modern technologies for teaching different skills in their lesson.
2. Encouraging teachers to exchange visits and hold periodical meetings to discuss using modern technology such as IDVs in teaching.
3. Facilitating teachers' missions through providing them with worksheets needed for their lessons and using the available services of the internet to search for methodology issues.
4. Re-designing the curriculum based on modern technology such as IDVs.
5. Equipping schools with well-equipped computer laboratories in terms of updated computer devices connected to the internet access. This helps teachers to activate and employ modern technology and techniques in teaching.
6. Supplying teachers with instructional materials for raising their awareness of the IDVs and its importance and necessity to be employed in teaching the four skills and areas of English language.

7. Involving teachers in training courses related to the implementation of IDVs in their classes.
8. Encouraging teachers to computerize the lessons to fit the students' abilities and enable them to interact with the lesson effectively.

5.5.3. Recommendations to teachers of English

The researcher recommends the following to the teachers of English:

1. Providing support for the students to be able to learn on their own through using modern technology like IDVs.
2. Implementing modern technology that activates students' prior knowledge utilizing IDVs.
3. Having training sessions on how to use and build up IDVs in teaching various skills.
4. Increasing their positive feelings towards reading comprehension skills as interactive skills and not as receptive ones.
5. Adopting IDVs to improve students' reading comprehension skills fairly and satisfactorily.
6. Using IDVs with all English skills, listening, speaking, reading and writing.
7. Considering students' individual differences and learning styles in IDVs activities.
8. Selecting efficient methods and techniques to motivate students' participation in the classroom.
9. Transferring their role from being instructors who dominate the class into educators whose role is to organize, help, guide, coordinate, lead, and support the students to communicate and acquire the necessary language.

5.5.4. Recommendations to the Students

The researcher recommends the following to the students:

1. Using IDVs can make students' learning become self-paced.
2. Using IDVs helps students to have more control over their learning. They can repeat exercises as many times as they choose, or move on to the next items. They can determine which activities are the most important to their needs and focus on those
3. IDVs can increase students' motivation, decrease their anxiety, foster more student-centered activities, provide them with authentic materials and audiences.

5.5.5. Recommendations for Further Studies

1. Conducting studies based on IDVs not only on reading comprehension skills but also on other skills as listening, speaking and writing and other language areas such as structure, pronunciation and functions.
2. Conducting studies to investigate the impact of IDVs on other variables such as creative thinking, critical thinking, and self conception.
3. Conducting studies based on other meta-cognitive strategies to develop reading comprehension skills
5. Integrating technology into pre-service education through IDVs.
6. Conducting studies to investigate difficulties facing teachers and students when using the IDVs.
7. Conducting studies to investigate the effect of IDVs –based learning on self-learning.
8. Conducting studies to explore how learners' attitudes towards using IDVs learning affect their language learning
9. Conducting studies to investigate the effect of IDVs on the achievement and attitudes of the prospective teachers.

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Appendices

Appendix (1)

**The Islamic University- Gaza
Deanery of Higher Education
Faculty of Education
Department of Curriculum and Methodology**



Dear Referee,

The researcher is conducting a study entitled "**The Effectiveness of Using Interactive Digital Videos on Developing Sixth Graders' English Reading Skills and Vocabulary learning and Retention**" to obtain master's degree in curriculum and English teaching Methods.

One of the study's requirements is to identify the most important reading skills in order to build an achievement test(pre and post) to achieve the purpose of the study. Thus, the researcher prepared the following instruments:

1. Content analysis card for the units of *English for Palestine* Grade 6B.
2. A reading comprehension skills checklist.

Because of the importance of your opinion and experience, you are kindly requested to look carefully and check each instrument and write your response respectively.

Thanks for your kind help and cooperation

**The Researcher
Ashraf Ahmed kuhail**

Content Analysis Card

The researcher analyzed the reading comprehension activities of seven units of the Pupil's Book – Grade 6 as a sample. You are kindly invited to referee the content analysis card. Please, read it carefully and tick the appropriate box.

No	Items	Yes	No	Neutral
1	Does the content analysis card meet its purpose?			
2	Are seven units as a sample satisfactory?(all the units of the second term.)			
3	Does the content analysis meet the operational definitions?			

From your point of view ,what are the most important reading comprehension skills for the sixth graders?

.....
.....
.....
.....
.....

Any further comments are highly appreciated.

.....
.....

Referee's Name & Title:

.....

Your kind cooperation and help are highly appreciated

***Content Analysis Card for Reading Comprehension Skills & new
Vocabularies "English for Palestine" 6th Grade Pupil's Book
Units 10, 11, 12, 13,15,16 &17***

The Purpose of the Analysis

- The analysis aims to explore reading comprehension skills intended to be developed in this study.
- The analysis aims to explore and determine the new vocabularies mentioned in unit 13 &15

The Sample of the Analysis

The sample involves seven units selected from the Pupil's Book of the sixth grade which contains nine units for the second semester. (two are revision units)

Unit of the Analysis

Each unit as a whole represents a unit of the analysis.

Elements of the Analysis

Analysis of the units depends on:

1. Exploring the reading comprehension skills and sub skills.
2. Exploring the activities of reading comprehension available in the textbook of the 6th grade after the reading passages in each unit.
3. Exploring the new vocabularies mentioned in unit 13&15.

Unit of Registration

The registration unit is the unit which contains the purpose of the analysis (the activities of reading comprehension skills and the new vocabularies).

Limitations of the Analysis

- The analysis deals with reading comprehension skills attempted by the Ministry of Education to be achieved at *English for Palestine* 6th Grade. It focuses on (7) units of the textbook where the activities of reading comprehension are available.
- The second part of the analysis(key vocabulary) is limited for unit 13 &15 of the 6th Grade pupil's book(second semester)

Definition of Terms

The researcher defines the terms as:

Interactive digital video

It is a digital multimedia presentation that can take user input to perform some action. Such type of multimedia incorporates a wide variety of interactive elements directly into the video itself, including hot spots, questions, calculations and more.

Reading skills:

Reading skills are specific abilities which enable a reader to read anything written with independence, comprehension and fluency. They are represented in cognitive and meta cognitive processes including prediction, skimming, scanning ,guessing meaning of words from context, monitoring, summarizing and inferring.

Vocabulary:

A set of words presented in each unit of the Palestinian English textbook "English for Palestine 6th grade". Which are intended to be taught to the pupils.

Abbreviations:

Per.: percentage

Fre.: Frequency

Content analysis card for Reading Comprehension Skills

No	Reading comprehension skills	Unit10		Unit11		Unit12		Unit13		Unit15		Unlit16		Unit17		Total	
		Fre.	Per	Fre.	Per	Fre.	Per	Fre.	Per	Fre.	Per	Fre.	Per	Fre.	Per	Fre.	Per
1.	Distinguish facts from opinions.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.	Make predictions about reading texts.	1		0	0	0	0	1		1	0	0	0	1		4	
3.	Recognize pronoun referents.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.	Scan for specific information from texts.	5		3		4		4		5		3		4		28	
5.	Identify the main idea of reading text.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.	Deduce meaning of unfamiliar words from context.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7.	Skim for gist or general impression of text.	1	0	0	0	1	0	1	0	1	0	1	0	2	0	7	
8.	Answer factual questions.	0	0	0	0	0	0	2		3		0	0	0	0	5	
9.	Answer inferential questions.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10.	Summarize reading text.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11.	Identify supporting details.	0	0	1		0	0	1		0	0	0	0	1		3	0
12.	Interpret information in diagrammatic form.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13.	Distinguish between the main idea from the supporting details.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14.	Answer judgment or evaluation questions.	2		2		2		2		2		2		2		14	
15.	Relate text to personal experience, opinion or evaluation.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16.	Infer mood and author's attitude.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17.	Develop awareness of semantic fields(word mapping)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18.	Connect the text to other written passages and situations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19.	Generate questions about reading text.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.	analyze text for setting, theme and characters.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21.	Make inferences about reading text	1		1		1		1		1		1		1		7	
22.	Make judgments about the written text's content	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Content analysis for new vocabulary

Unit	Number of Key vocabulary	Key vocabulary
13	15	Become - above - below – air – change - correct - sun wrong – clouds - water cycle - Into – rain – rise – vapour fall
15	16	agree - don't agree - compass – directions – Earth - east - west – explore - explorer - ocean - south north – Woman –Man –Exciting - boring

English reading comprehension skills checklist for 6th graders

Please, tick (✓) in front of the suitable degree of importance for sixth graders' reading comprehension skills using the scale below.

1 = Slight important 2 = Important 3 = Very important

No	Items	Degree of importance		
		1	2	3
1.	Identify the main ideas of a reading text.			
2.	Summarize the main ideas of a reading text.			
3.	Make predictions about content.			
4.	Make inferences.			
5.	Identify supporting details.			
6.	Distinguish main idea from supporting details.			
7.	Use context to guess meaning of unknown words.			
8.	Skim texts for general meaning.			
9.	Distinguish fact from opinion.			
10.	Scan texts for specific information.			
11.	Recognize reference words.			
12.	Give personal and critical responses to texts, ideas and arguments.			
13.	Make judgments about the written text's content			
14.	Connect the text to other written passages and situations			
15.	Identify simple facts presented in written text			

Appendix (2)

**The Islamic University- Gaza
Deanery of Higher Education
Faculty of Education
Department of Curriculum and Methodology**



Vocabulary Pre-Post & Retention test for Palestinian sixth Graders

Dear referee,

The researcher is conducting a study entitled " **The Effectiveness of Using Interactive Digital Videos on Developing Sixth Graders' English Reading Skills and Vocabulary learning and Retention** " to obtain master's degree in curriculum and English teaching methods.

Your notes and responses will be highly appreciated and confidential.

No	Item	High	Average	Low
1.	The test items are suitable for sixth graders.			
2.	The test layout is acceptable.			
3.	The test covers unit (13/15) key vocabulary			
4.	The assigned time for the test is suitable.			

Any further comments are highly appreciated.

Many thanks for your kind cooperation

The researcher

Ashraf Ahmed Kuhail

**The Islamic University- Gaza
Deanery of Higher Education
Faculty of Education
Department of Curriculum and Methodology**



Vocabulary Pre-Post & Retention test for Palestinian sixth Graders

Dear student,

The researcher is conducting a study entitled " **The Effectiveness of Using Interactive Digital Videos on Developing Sixth Graders' English Reading Skills and Vocabulary learning and Retention** " to obtain master's degree in curriculum and English teaching methods.

One of the requirements of this study is to construct a vocabulary test to investigate Palestinian sixth graders' vocabulary achievement.

Because of the importance of this vocabulary achievement test, you're kindly requested to answer the questions carefully.

Many thanks for your kind cooperation

**The researcher
Ashraf Ahmed Kuhail**

Vocabulary Pre-Post- & Retention

Name:

Class:

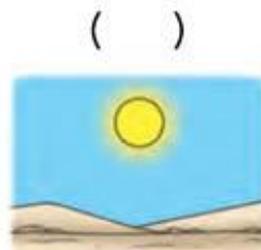
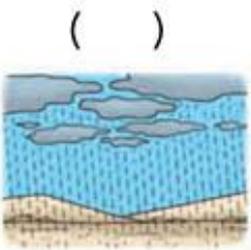
Time:40Ms.

1). Complete the following by using a suitable word from the box. (10 marks)

Vapour - south - cycle - above - directions - earth - air - explorer - sun - compass

2. We live on the -----.
3. When you boil the water, it changes into -----.
4. The ----- shows us the directions.
5. The ----- cools the vapour.
6. Ibn Battuta visited Africa in the -----.
7. The compass helps me know the four -----.
8. The water ----- tells us how we get rain.
9. Ibn Battuta is an -----.
10. The ----- makes the water hot.

2). Match the words with their pictures. (5 marks)



a) west

b) earth

c) rain

d) explore

e) sun

3). Write each word in the box next to its meaning below. (5 marks)

Water cycle - earth - ocean - compass - vapour

- 1- _____ a place where we live in.
- 2- _____ a tool helps us to know the directions.
- 3- _____ tells us where does rain come from.
- 4- _____ the gas formed from hot water.
- 5- _____ A place we can sail in.

4). Match the words in the box below with their opposites. (5 marks)

South - below - woman - fall - hot

Man	
	Cold
North	
Rise	
	Above

5). Circle the correct answer: (4 marks)

1. Jacques Cousteau sailed in a boat to (explore - explorer) the ocean.
2. Ibn Battuta was from (north - south) Africa.
3. The water changes into (water - vapour) when it is hot.
4. The (air - sun) cools the vapour.

6). Classify the words in the box so as they go under their fields. (6 marks)

Teacher - west - explorer - cold - south - hot

Directions	Jobs	Weather

Good Luck

Appendix (3)

**The Islamic University- Gaza
Deanery of Higher Education
Faculty of Education
Department of Curriculum and Methodology**



Pre- Post Reading comprehension Test for Palestinian sixth Graders

Dear referee,

The researcher is conducting a study entitled " **The Effectiveness of Using Interactive Digital Videos on Developing Sixth Graders' English Reading Skills and Vocabulary learning and Retention** " to obtain master's degree in curriculum and English teaching methods.

As the aim of the study is to examine the effect of using interactive digital videos in learning Reading comprehension on sixth graders in Gaza, the researcher has designed a pre-posttest in the light of the table of specifications.

Because of the importance of your opinion and experience, you are kindly requested to look carefully at the items of the list to:

- 1- determine the degree of suitability for the sixth grader students .
- 2- modify the language if necessary.
- 3- suggest ideas or issues to enrich the test.

The test should examine the students' ability to :

- 1- Make predictions about reading text .
- 2- Skim for gist or general idea of text .
- 3- Scan for specific information from texts .
- 4- Make inferences about reading text, reading between the lines to get information the writer does not clearly put.
- 5- Recognize reference words.
- 6- Guessing meaning from context.

Thanks for your kind help and cooperation

**The Researcher
Ashraf Ahmed Kuhail**

Item	High	Average	Low
There is coherence between the test items and the table of specification.			
The layout is acceptable.			
The rubrics are clear.			
The time assigned is suitable.			
The reading passages suit sixth graders' level.			
The distribution of marks is suitable			
The test suits the table of specifications			

Your comments are highly appreciated.

University Professor **Supervisor** **Teacher**

Years of experience

Thanks a lot for your co-operation

**The Researcher
Ashraf Ahmed Kuhail**

Reading comprehension skills Pre-Posttest

Name:

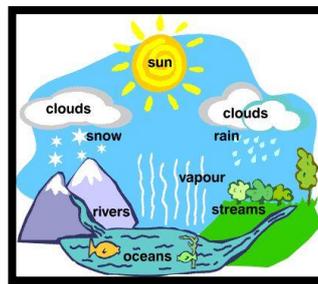
Class:

Time:40Ms.

1) Look at the picture & Choose the best answer: (Make predictions about content). (1 mark)

A. The text is about :

- a- Water vapour .
- b- Water cycle.
- c- Water boiling.
- d- Water benefits.



2)Read the following text and then answer the questions below :

Mr. Ali shows the class a picture of the water cycle. He talks about how rain falls. The sun is very hot. The water in the sea becomes warm. Some of it changes into vapour and rises up. The air cools the vapour. The vapour makes clouds. When the clouds get full of water, rain falls. And the water cycle starts again.

A) The main idea of the text is: (Skim texts for general meaning). (1 marks)

- a) Where does rain come from.
- b) The rain benefits.
- c) Mr. Ali and his class.
- d) How does water change.

B) Questions: (Scan texts for specific information). (2 marks)

1. Why does the water in the sea become warm ?

- a) Because the air is hot.
- b) Because the vapour is hot.
- c) Because the sun is hot.
- d) Because the clouds are hot.

2. Who talk about how rain falls ?

- a) Mr. Ali and his friends.
- b) Mr. Ali and his class.
- c) Mr. Ali and his girl.
- d) Mr. Ali and his wife.

C) Choose and Complete: (Scan texts for specific information). (1 mark)

1. Some of the ----- changes into vapour.

- a) clouds.
- b) rain.
- c) sun.
- d) water.

D) Get from the passage: (Recognize reference words). (3 marks)

1. The underlined pronoun " He " refers to:

- a) Mr. Ali.
- b) The class.
- c) Mr. Ahmed.
- d) Mr. Ala'a

2. The underlined pronoun " it " refers to:

- a) water.
- b) vapour.
- c) Mr. Ali.
- d) sun.

3. The meaning of (above)= : (Guessing meaning from context)

- a) down.
- b) up.
- c) next.

d) in

E) Choose the best answer: (Make inferences) (1 mark)

1- Why do you think Mr. Ali showed the class a picture of the water cycle?

- a) To tell them how water become vapour.
- b) To tell them where does rain come from.
- c) To tell them how the sun warms the water.
- d) To tell them a story.

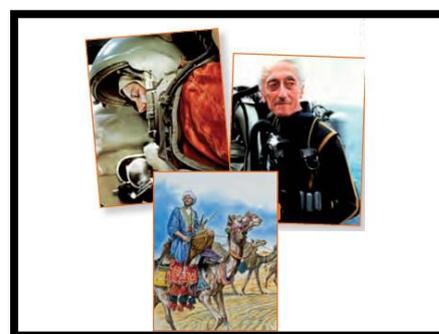
3) Look at the pictures & choose the best answer: (Make predictions about content). (2marks)

A. The text is about :

- a- Famous explorers .
- b- The four directions.
- c- The sea.
- d- The space.

B. The three explorers explored:

- a- Only the earth .
- b- Earth, space and oceans.
- c- Only space and earth.
- d-Only space.



4)Read the following text and then answer the questions below :

Mr. Ali and his class talked about famous explorers. Ibn Battuta was from the north of Africa. He travelled east to visit the holy cities of Makkah and Madinah. He visited Asia in the east, Europe in the north and Africa in the south, but not North America. Jacques Cousteau was from Europe. He sailed in a boat to explore the ocean. He lived on the boat for many months. He saw lots of sea plants and sea animals. Valentina Tereshkova was from Asia. She was the first woman to go into space. Her spaceship went around the Earth forty- eight times.

A) The main idea of the text is: (Skim texts for general meaning). (1 marks)

- a) To learn about Mr. Ali's class.
- b) To learn about great explorers.

c) To learn about the earth.

d) to learn about space

B) Questions: (Scan texts for specific information). (2 marks)

1. What did Cousteau explore ?

a) The earth.

b) Earth and space.

c) Oceans.

d) Oceans and space.

2. Who was the first woman to go into space ?

a) Valentina Tereshkova .

b) Jacques Cousteau.

c) Valentina Tamara.

d) Amelia earhart.

C) Complete: (Scan texts for specific information). (1 mark)

1. Ibn Battuta was from -----.

a) Europe.

b) North America.

c) North Africa.

d) Asia.

D) Get from the passage: (Recognize reference words). (3 marks)

1. The underlined pronoun " He " refers to:

a) Valentina Tereshkova .

b) Jacques Cousteau.

c) Valentina Tamara.

d) Amelia earhart.

2. The underlined pronoun " she " refers to:

a) Amelia earhart.

b) Jacques Cousteau.

c) Valentina Tamara.

d) Valentina Tereshkova .

3. The meaning of "Well known" = : (Guessing meaning from context)

a) favorite .

b) famous.

c) fantastic.

d) fabulous .

E) Choose the best answer: (Make inferences) (2 marks)

1- Why do you think Cousteau used a boat?

a) Because he was exploring the space .

b) Because he was exploring the seas and oceans.

c) Because he was exploring the earth.

d) Because it's more safe.

2- Which of the following we use to explore the space?

a) Ships and boats.

b) Spaceships.

c) Camels and horses.

d) Cars.

Good Luck

Appendix (4)

Reading comprehension skills test specifications

Skill	No. of units	No. of periods	items	Questions numbers	Percentage
Make predictions about content	2 units (13/15)	3	3	1,3	15%
Skim texts for general meaning		1	2	2,4 (A)	10%
Scan texts for specific information		4	6	2,4 (B-C)	30%
Make inferences		3	3	2,4 (E)	15%
Recognize reference words		3	4	2,4 (D,1-2)	20%
Guessing meaning from context		2	2	2,4(D-3)	10%
Total			16	20	

Appendix (5)
Referee committee

No.	Name	Field	Qualification	Institute
1-	Prof. Walid Aamer	Eng. Dep.	Professor of Linguistics	Islamic University
2-	Prof. Awad Keshta	Faculty of Education	Ph.D. Methodology	Islamic University
3-	Prof. Hassan Abu Jarad	Faculty of Education	Ph.D. Methodology	Al Azhar University
4-	Dr. Abdrabu Abu Alyan	Eng. Dep.	Ph.D. Education	Islamic University
5-	Dr. Ahmed Maher Al Nakhal	Faculty of Education	Ph.D. Methodology	Al-Quds Open University
6-	Dr. Wisam Al Shawa	Faculty of Education	Ph.D. Methodology	Al-Quds Open University
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10-	Mrs. Sahar Hassan	Supervisor of English	B.A. English Language	MOEHE
11-	Mr. Moataz Abu Ismaiel	Teacher	M.A. International development and cooperation	MOEHE
12-	Mrs. Yasmin Al Omary	Teacher	B.A. English Language	MOEHE
13-	Mrs. Ghada Kuhail	Teacher	B.A. English Language	UNRWA
14-	Mrs. Eman Abu Dahrouj	Teacher	B.A. English Language	UNRWA
15-	Mr. Mohamed Al Amodi	Teacher	B.A. English Language	MOEHE
16-	Mr. Ahmed Awad	Teacher	B.A. English Language	MOEHE