The Effect of a Computerized Program on Developing Palestinian Ninth Graders' Reading Comprehension Skills and their Attitudes towards Reading

أثر برنامج محوسب على تحسين القراءة الفاهمة لدى طلاب الصف التاسع الأساسي في مبحث اللغة الإنجليزية واتجاهاتهم نحو القراءة في فلسطين

Researchers

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Introduction

Reading is the most important skill which is firstly recommended by the Holy Qur'an as it is cited in Surah Al 'A'laq (96:597):

Proclaim! ( or Read !) in the name of thy Lord and Cherisher, Who created- (1) Created man, out of a ( mere ) clot of congealed blood (2) proclaim! And thy Lord is Most Bountiful, (3) He Who taught ( the use of ) the pen, (4)Taught man that which he knew not (5).

Clearly, reading is a pivotal skill for students which enables them to acquire knowledge and develop their academic areas. The essential goal of teaching reading is to train students to read efficiently and quickly so as to get information and meaning from the written material rapidly with full understanding and enjoyment.

Reading is considered as an additional tool of communication to listening and speaking. People who have no chance to talk with native speakers of the target language can have an access through reading to their literature, journals, and then understand much about their civilization. In this sense, reading is the window through which other cultures can be seen and more general or specific knowledge can be gained. (Kailani and Muqattash, 2008:85)

Unsurprisingly, the English Language Curriculum committee in the Palestinian Ministry of Education (1999) concludes that reading comprehension is the most important skill taught in school and the ability to read accurately and fluently is the most important need for the Palestinian student. The students will be trained for: (1) Information and understanding:
collecting data, facts, or ideas; discovering relationships, concepts, or generalizations; and using knowledge generated from text. (2) Aesthetic Response: enjoy and appreciate texts, relate texts to oneself, and respond sensitively to texts with diverse social, historical, and cultural dimensions. (3) Critical Analysis and Evaluation: Use personal and objective criteria to form opinions or to make judgments about ideas and information in written texts. Obviously, reading comprehension enables students to communicate effectively and appropriately with the written text, and then obtain an education.

The researchers believe that students in Palestine face difficulties in reading comprehension. As a result, UNRWA has modified the curriculum from grade 1 to grade 9 in the Gaza Strip in 2008, 2009 and 2010. Supervisors confirm the curriculum difficulties saying: "It's a well-known fact that the curricula are too long and have too many activities. Moreover, they were designed for a certain type of students as the elite. So, teachers were obliged for the lack of time to concentrate upon quantity not quality in order to be able to cover the syllabi in the due time. As a result, students do not grasp knowledge properly in their classes and when they go home most parents cannot help their kids because they are not educated enough."(Education Department/UNRWA, 2010-2011:3). Thus, it's clear that students in Palestine face a serious problem in grasping the items of the curriculum in general and in reading comprehension in particular. "Comprehension is complex and multifaceted, and it is thus no surprise that the population of children identified as having reading comprehension difficulties. (Nation 2004:12)
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The researchers, in this study, suggest a well-designed computerized program to develop students' reading comprehension because technology in general and computers in particular have become the most used tool in all fields especially education. Students have become familiar with the text and comprehend its idea when using computers. Using computers is one of the most efficient ways to make the lessons audio-visual, to supply a fluent and effective education, to keep the students away from memorization, to obtain speed and permanence in perception. Computers address more senses compared to other technological tools and make abstract and complicated concepts concrete digitally because of their extensive multimedia properties. (Abo Oda, 2010). In the same concern, Becker (2000:4) states that computer technologies and the environments they support can help motivate the learner to learn, increase the learner's control over the material being presented, and allow the learner to take an active role in the learning process.

2. Statement of the problem

The researchers used some techniques to improve students' reading comprehension and motivation, they found that these techniques were interesting for some students but others felt bored while reading from textbooks and this caused lack in comprehension. Fortunately, with the help of computer laboratories which were provided recently in the UNRWA schools in Gaza Governorates, the researchers were able to get students involved in a technological environment. Further, they noticed that students perform better when being involved in a technological environment. Thus, the main intent of this research is to identify the effect of computers on
developing students' reading comprehension and their attitudes towards reading.

3. Research Questions

The research main question is:

"What is the effect of a computerized program on developing Palestinian ninth graders' reading comprehension and students' attitudes towards reading?"

The research sub-questions are:

1. What is the suggested computerized program which may develop Palestinian ninth graders' reading comprehension and their attitudes towards reading?
2. Are there statistically significant differences at (α ≤ 0.05) in the total average score of the post-test between the experimental group and the control group?
3. Are there statistically significant differences at (α ≤ 0.05) in the total average score of the post attitude scale between the experimental group and the control group?

4. Purpose of the study

This study aims at investigating the effect of a computerized program on developing reading comprehension skills. In addition, it seeks examining the students' attitudes towards reading importance, reading method, reading teacher and the integration of computer in a reading course.
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Literature Review

Nature of reading

The reading concept has been misunderstood due to some wrong ideas about its nature. As reading is a cognitive process which includes transferring the written symbols by the reader through the eyes, so these symbols need understanding meaning and then integrating this meaning into personal experiences. Therefore, there are some highly complex psychological processes concerned with reading. (Khater et al., 1981:43).

To illustrate,, there are two concepts of reading. Firstly, the mechanic pattern which means the physiological response to what is written. Secondly, the cognitive process in which the reader can think, infer, and understand meaning. As a result, reading is a complex process which includes not only printed words but also understanding meaning of the written expressions. (Yunis et al., 1998:162).

2. Reading in Islam

The Holy Qur'an is the basic source that confirms the importance of reading. Reading is found in different occasions in the Holy Qur'an as follows:

*Read! In the Name of your Lord, Who has created* (all that exists), *Has created man from a clot* (a piece of thick coagulated blood). *Read! And your Lord is the Most Generous, Who has taught* (the writing) *by the pen* (the Holy Qur'an, Al-Alaq Surah 96: 1,2, 3). On another occasion, Allah (SWT) states: “*We made the Quran easy to learn. Do any of you wish to learn?*” (the Holy Qur'an, Al-Qamar Surah /54:17). In addition, in (An-Nahl Surah, 75)" and when thou recitest the Qur'an, seek refuge in Allah from Satan the outcast." Also, (Al-Qiyámah Surah, 17 - 18) " *Lo! Upon us the putting
together thereof and the reading thereof. And when we read it, follow thou the reading."

3. The Importance of Reading

Reading is the most important skill which humans should acquire, as it is the means of communication, enjoyment and pleasure and it is one of the cognitive and emotional factors for humans. In addition, it has a social value where the human cultural and social heritage pass from one generation to another and from one individual to another through written or printed text.

Budir and Sadiq (2002:90) clarify the importance of reading as follows:

- It is a means of communication between people.
- It is a crucial factor for students to acquire several experiences and knowledge.
- It is a means for teaching good manners and values for pupils.

6. Reading purposes

Kailani and Muqattash (2008:82) state that there are several purposes for reading most important of which are the following:

- Reading for referential material so as to get factual information with which to operate in the environment.
- Reading for research to get some information concerning a certain problem under study.
- Reading for improving intellectual skills, or to gain more general or specific knowledge.
- Reading for summarizing a text or for writing a report on a subject.

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• Reading for entertainment or self-development as when we read a novel, story, a poem, in a newspaper, magazine, or journal.

Several types of skills are included depending on the reading activity. In other words, one focuses on related data and ignores material irrelevant to his objectives, when reading for pleasure one is free to read what one likes and how to read it. Therefore, reading is carried out for purposes other than reading the language itself.

7. Types of reading

The researchers have reviewed many researches and books but they did not find a clear classification of the types of reading. Some authors and researchers consider Skimming and scanning, for example, as types of reading while others think that they are skills of reading or reading comprehension and some methodologists consider them as reading strategies. Regardless of this difference, reading should be preceded by the purpose of reading. The researchers are going to handle the main types of reading as discussed in different books and researches as follows:

7.1. Extensive reading

Extensive reading means to read at length, for pleasure and in slow and relaxed way, intensive reading is likely to be more focused, less relaxed and dedicated to achieve study objectives. (Haboush, 2010:17). In the same concern, Ali (2010:27) concludes that extensive reading can be defined as free voluntary reading that involves rapid reading of large amounts of material or longer reading for general understanding with focus on meaning of what is being read than on language. Readers should read a large amount of easy, interesting, enjoyable, authentic material. It should be practiced in low anxiety environment to create a natural setting for language acquisition.
In fact, extensive reading improves the general knowledge of the reader and widens the reader's intellectual exposure.

Extensive reading is an approach to language teaching in which learners read a lot of easy material in the new language. They choose their own reading material and read it independently of the teacher. They read for general, overall meaning, and they read for information and enjoyment. (Bamford and Day, 2004:12)

Concerning *English For Palestine 9*, no extensive reading is included because it needs time. The researchers believe that it should be included in the curriculum as it widens and enriches students' knowledge.

**7.2. Intensive reading**

Ali (2010:15) states that intensive reading involves learners reading in detail with specific learning aims and tasks. It can be compared with extensive reading, which involves learners reading texts for enjoyment and developing general reading skills. The purpose of intensive reading is to teach new words and new patterns. Therefore, the reading material designed for intensive reading is usually a little higher than the students' level. In the classroom, intensive reading activities include skimming a text for specific information to answer true or false statements or filling gaps in a summary, scanning a text to match headings to paragraphs, and scanning jumbled paragraphs and then reading them carefully to put them into the correct order. So intensive reading is a process of learning instead of acquisition. Similar to Ali's, Kailani and Muqattash (2008:90) suggest that intensive reading is a classroom task carried on under the teacher's guidance. It is mainly concerned with texts and includes concentrating on new words, structures, expressions, functions, pronunciation and on cultural insights. It
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is carefully guided so that thorough understanding of the content may be achieved. The reading material designed for intensive reading is usually a little higher than the students' level. Associated with intensive reading are silent reading, reading aloud, SQ3R, skimming, scanning. Similarly, Paran(2003:39) states that intensive reading activities are needed for four main reasons: to help learners comprehend written texts, to become more aware of text organization to better comprehend, to learn how to use and monitor effective reading strategies, and to develop general literacy skills necessary to generate productive expressions in L2.

*English For Palestine 9* includes this type of reading as an essential one because it enables students to understand and comprehend the written text. It also, gets students achieve the learning aims.

2. **Reading comprehension**

Comprehension in reading is the ability to understand a written text. When students comprehend a written passage, they construct meaning from the words to understand the passage as a whole. (Paulsen & the IRIS Center, 2004).

Reading comprehension is the evolution of thought that occurs as we read. True understanding happens when readers merge their thinking with the text, ask questions, draw inferences, think about what’s important, and summarize and synthesize. This enables them to use their new understanding to ask further questions and guide new learning. This active, constructive, strategic thinking process entails far more than simply retelling. (Harvey and Goudvis, 2008:1). Similarly, Nofal (2003:10) clarifies that reading comprehension is not a purely verbal process; for the
written symbols to have meaning, they must be associated with the objects, action, and qualities they represent.

8. Reading Comprehension Difficulties for Palestinian EFL learners

The problems of Arab learners of English with English reading comprehension are well documented. Much of the focus has been on the “higher-level” areas such as syntactic processing and rhetorical structure, conceptual and cultural schemata, and learner attitude and motivation. (O’Sullivan, n.d.:3)

Mourtaga (2008:10) concludes that Arab EFL/ESL students, including the Palestinian ones, suffer from many reading problems as a result of teachers' misunderstanding of the reading process, students' lack of the linguistic competence, differences between English and Arabic, and English spelling-pronunciation irregularities. He states that "... our students find reading English a very complicated skill, and therefore, they have many problems with it. The product of the Gaza schools, therefore, is poor readers who realize this fact only when they encounter big reading assignments when they enter a university."

English for Palestine-Grade 9

*English for Palestine*-Grade 9 complements and extends the work in Grade 8.

As such, Grade 9 maintains the continuity of the course and offers many new features to stimulate and challenge teachers and students: for example, there is a strong emphasis on developing reading skills, and using reading to expand vocabulary. As in the previous levels, the course has a double strand
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of communicative activities and work skills. The skill of reading, writing, listening and speaking are integrated throughout the course. There is more emphasis on combining the skills in sequences of activities. New vocabulary and grammatical structures are carefully controlled and are introduced in the context of the language skills. Writing is presented in graded activities to encourage them to write independently. The writing element of the syllabus in grade 9 focuses on using notes to write clearly and accurately about the topic and on writing summaries. *(English For Palestine 9, Teacher's Book, 2008: 4)*

1. Technology in the learning Process

We are at the dawn of an era in which educators have the potential to harness technology to produce a step change in student achievement. Although visionaries have been promising for years that technology would transform primary and secondary education – and despite the billions of dollars spent on networking schools and equipping them with computers and other devices – the actual impact on student outcomes to date has been disappointing. Even where educators have succeeded in introducing devices and software into the classroom, they've often failed of leverage that new technology to improve student performance. Yet when technology is strategically introduced into every step of the educational value chain, it does, in fact, have the potential to enhance every aspect of instruction and learning. *(Bailey et al., 2011:2)*

Brewster et al. (2002:160) state that technology can contribute to the global development of our pupils and complies with the psychological, linguistic, cognitive, social and cultural objectives of most language teaching programs.
2. Computer Assisted Language Learning (CALL)

Computer-based instruction has been challenging traditional teaching and learning processes. The role of these technologies in language learning and teaching is called Computer Assisted Language Learning (CALL). CALL is a language learning and teaching approach in which the computer is used as a tool for presentation, assisting students, and evaluating learning material, and has an interactional element. (Ates et al., 2006:1)

Computers play an increasingly large part in our professional and personal lives. Modern computers with multimedia capabilities can provide an interactive learning experience. (Hassell and Dacre, 2003:1).

CALL and reading skills

There are three main ways in which computers are useful in helping language learners develop reading skills.

a) **Incidental reading.** Most of the CALL programs, whether oriented towards reading or not, involve the learner in reading text for the successful completion of the activity.

b) **Reading comprehension.** Traditional question and answer CALL programs are used for reading comprehension as well as grammar and vocabulary development.

c) **Text manipulation.** There are a number of ways in which computers can manipulate continuous text which involve the learner in close study of the
content and structure of the text. An example might be shadow reading which provides students with authentic texts. Additionally, sentence structure, speed reading and cloze-reading are some of the alternative ways of developing reading skills. (Gunduz, 2005:201)

7. Using computers in a reading class
Using computers in the language classroom for reading may support the development of reading skills among students because reading materials from the internet, for example, provide a variety of current, authentic texts compared to potentially dated reading material sourced from textbooks. (Abu Bakar, 2005:43)

Video-based lessons
Educational videos can be displayed on computer screen as the computer is an interesting machine for students. Richards (2002:362) states that video-based lessons can be highly stimulating, and provide a rich resource for language learning. It is the teacher, not the video, who can make any video based lesson a fruitful language learning experience. It is the teacher who chooses the video; design tasks and activities that facilitate active learning; prepares students for the previewing, viewing, and post-viewing activities, raises students' awareness of certain language points; and integrates the video with other aspects of the curriculum.

Due to the importance of educational video which helps students understand and then interact with the text, the researchers add a designed related video to each reading text. This makes the text easier to be understood.

Attitudes: An attitude is an idea charged with emotion, which predisposes a class of actions to a particular class of social actions. There are three main
components attached to attitudes. First, a cognitive component, that is the idea which is generally some category used by humans in thinking, whereby categories are inferred from consistencies in responses to discriminably different stimuli. Second, an affective component, that is the emotion, which charges the ideas. Third, a behavioural component associated with a predisposition to action. (Triandis, 1971:6). In the same concern, Eagly& Chaiken (1993:4) defines the attitude as a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor.

3. Students' attitudes towards computer-based learning and the role of teachers

Computers are profit tools for individual and student-centred learning, so, it is essential to determine student attitudes toward the use of computers, because student attitudes have contributed to our understanding of why computers have enhanced achievement and performance and motivation. Computer attitudes are important because of the long-documented relationship between computer attitudes and motivation and performance. (Usun et al. 2004:3)

Previous Studies

First: Studies related to the effect of Computer Based Learning on developing reading comprehension

Abu Seileek (2011)

This study investigated the effect of the gloss presentation in different locations in the reading text (in the margin, at the bottom of the computer screen, in a pop-up window, or after glossed word) and texts with no
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glosses. It also sought to find the effect of gloss type on the participants’ achievement. Seventy-eight second semester undergraduate students participated in this study. They were enrolled in a general English language course, an obligatory course to all students of the College of Arts at Al al-Bayt University which is situated in the northern region in Jordan. The results showed that reading passages with hypermedia annotations significantly benefited passage comprehension and vocabulary compared to reading passages with no annotations.

Chen et al (2011)

The purpose of the present study was to evaluate the effectiveness of the design of using Quick Response (QR) codes to provide students direct access to pre-designed digital materials and the use of scaffolded questioning in promoting students’ reading comprehension. The experiment was conducted in a class entitled “Advanced Business English and Communications” in a public university in southern Taiwan. A total of 77 students (including 8 sophomores, 14 juniors, 9 seniors, and 46 graduate students) participated in the experiment. A quasi-experiment was conducted to evaluate the effectiveness of direct access to the digital materials prepared by the instructor using QR codes and that of scaffolded questioning in improving students’ reading comprehension. The results of the study showed that scaffolded questioning significantly benefits students’ reading comprehension, especially when the article is difficult. Overall, students’ responses to the learning experience survey showed that most students felt positive toward the system developed in this study in terms of enhancing their reading comprehension. They were impressed by the feasibility of accessing digital resources directly from the printed content. The survey
showed that most students agreed that the integrated print-and-digital-material-based learning system benefits English reading comprehension.

**Park and Kim (2011)**

This study investigated adult English language learners’ reading-strategy use when they read online texts in hypermedia learning environments. The learners joined the online Independent English Study Group (IESG) and worked both individually and collaboratively. In the summer of 2008, the co-researchers created an online English study group named Independent English Study Group (IESG) for ESL students at an urban research university in the southeastern part of the United States. Ten English language learners (ELLs) from low-intermediate to high-intermediate levels who were enrolled in the English Language Institute joined IESG between the summer of 2008 and the fall of 2009. Three of the ten students actively participated in reading activities. This case study focused on three participants from November 2008 to April 2009. The researchers observed the participants in order to collect data. The findings also revealed that “hybrid” online reading emphasized participants’ various reaction patterns and preferences in their hypermedia learning environments. In addition, reading online confirmed that students can respond to the text effectively.

**Second: Studies related to students’ attitudes towards integrating computers in education**

**Philip et al. (2011)**

The purpose of this study was to investigate the effects of Computer-Assisted Instruction (CAI) on students’ attitude and achievement in matrices and transformations among four students who received instruction using
CAI module or conventional instruction methods. Six classes selected at random with 205 students participated in the study in Kenya. The pretest – posttest control group experimental research design was used. Results indicated higher achievement and positive attitudes with CAI treatment groups. Making connections between the goals of Mathematics education and CAI offers a valuable means for improving mathematical knowledge and skills and hence performance in Mathematics.

Mbah (2010)

This research aimed at investigating the impact of information and communication technology (ICT) on students’ study habits. The research was conducted with two main purposes; Firstly, to investigate students’ familiarity and attitude towards ICTs, and secondly, to examine the possible relationship between students’ use of ICTs and study habits. The sampling technique used here was the proportionate stratified random sampling technique and the sample consisted of 100 CST/Biology students for the 2009/2010 academic year, out of 186 students in the department of CST/Biology, faculty of education, University of Buea, Cameroon. The direct delivery method was used to administer the questionnaires so as to have a high return rate of questionnaires. The results revealed that students have a positive attitude towards ICTs as they facilitate learning, although male students are more favourable toward ICT usage and likely to find that ICT’s help them at their studies. As such students constantly change their study habits based on the type of ICT they use to ease studies.

Summary of the findings of previous studies
Having reviewed the previous studies, the researcher's background has been enriched especially on revealing the technology effects on developing students' educational and reading skills and improving their attitudes and motivation to learn in general and to read in particular.

The first section concerning computer with all its facilities on developing reading comprehension confirms the effectiveness of the computer on developing reading in general and reading comprehension skills. Apparently, all the studies indicated that the computer with all its software programs as multimedia and online programs enhance students' reading competency, literacy and other reading difficulties.

The second section of the previous studies concerning computers' effect on students' attitudes towards integrating technology in an EFL classroom. The result of these studies show that the use of technology in EFL classrooms provides meaningful and interesting process in the language learning and students can be more motivated with this technological development in EFL Classrooms. Moreover, the results indicate that the integration of technology in classrooms enhances the response of readers and describes the ways in which a teacher can facilitate those responses across contexts.

Apparently, computer, with its hypermedia, multimedia, and hyperlink capabilities, is more prevalent in today’s classrooms than ever before. Future research should explore additional learning strategies in computer environments. As computers become a more obvious part of the learning process and students become more and more comfortable with and
in control of computer technology, instruction and learning must adjust to take full advantage.

This study includes more tools than the previous studies did, the researchers used four tools in this study in order to reach accurate results. This study also uses Microsoft PowerPoint and the Microsoft Word besides related videos in designing the computerized program but most the previous studies used the internet.

Methodology

1. Type of Research Design

The study attempted the experimental approach. Two groups were assigned as the participants of the study; the experimental group, and the control group. The research includes three variables; the first variable is a computerized program. The second is reading comprehension skills. The third is students' attitudes towards reading. The experimental group was taught the reading comprehension texts via computer, while the control group was taught via the traditional method. The experiment lasted for ten weeks.

2. Sampling procedures

The sample of the study consisted of (60) students distributed into two groups; one experimental group consists of (30) students and one control group includes (30) students. The groups were a purposive sample from Deir El Balah Prep. "B" Boys' School for Refugees in Deir Al Balah city in the Gaza strip which is run by UNRWA.
The students in both groups were equivalent in the economic, cultural and social level. They were equivalent in their general achievement in accordance with the statistical treatment of their results in the first term of the school year (2010-2011). In this year, all classes were equivalent in their achievement as they were distributed according to their achievement in equivalent classes. They were equivalent in their English language achievement in accordance with the statistical treatment of their results in the final-first term exam of the school year (2010-2011). Age variable of the sample was also controlled before the experimental application. They were 15 years old. In addition, the previous learning in the reading comprehension skills and the previous attitudes towards reading were controlled too.

3. Instrumentation

To achieve the aims of the study, the researchers used four tools: they constructed a questionnaire of the reading comprehension skills in order to choose the most important skills for ninth graders. After that, the researchers prepared a pre-post achievement test depending on the most important skills. Moreover, they designed a students' attitude scale towards reading. In addition, they designed a computer program trying to help students understand the text and interact with it.

A questionnaire of reading comprehension skills:

The researchers included the general aims of the reading comprehension skills for the ninth graders which were prepared by the English Language Curriculum (1999) as a questionnaire for teachers to choose the most
important reading skills for ninth graders. The items of the questionnaire are twenty-four reading comprehension skills. Appendix (1)

**Description of the questionnaire**

A questionnaire of 24 items was used in this study in order to rate the degree of importance of the reading comprehension skills. Respondents were asked to rate each item of the reading comprehension skills as follows: (3) = very important, (2) = important, (1) = slightly important.

**The application of the questionnaire**

The questionnaire was applied on (6) English Language supervisors and (19) expert teachers to rate the degree of importance of the reading comprehension skills for the ninth graders. After that, relative weight was calculated and the most important skills were chosen which got more than (90%) (Appendix 2). The result of this questionnaire showed that there were (6) important skills out of the (24) reading comprehension skills. (see chart 1)

**Chart( 1) The most important skills**

<table>
<thead>
<tr>
<th>No.</th>
<th>Skills</th>
<th>Relative weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Make predictions about reading text.</td>
<td>92.00</td>
</tr>
<tr>
<td>2</td>
<td>Skim for gist or general impression of text or graphics.</td>
<td>94.67</td>
</tr>
<tr>
<td>3</td>
<td>Scan for specific information from texts and realia (ads, menus, schedule, calendar, travel information and tickets.)</td>
<td>93.33</td>
</tr>
</tbody>
</table>
Achievement test

A pre-post achievement test was prepared by the researchers to measure the students' achievement in reading comprehension skills. It was used as a pre test, applied before the experiment and as a post test, applied after the experiment. (Appendix 3)

The general aims of the test:

The test aimed at measuring the effect of a computerized program on the students' reading comprehension skills in English language. It was built according to the criteria of the test specification. The reading comprehension skills under investigation were prediction, skimming, scanning, developing awareness of synonyms and antonyms, deducing meaning of unfamiliar words from context and relating the text to personal experience, opinion or evaluation.

The items of the test:

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Develop awareness about synonyms and antonyms.</td>
<td>93.33</td>
</tr>
<tr>
<td>5</td>
<td>Deduce meaning of unfamiliar words from context.</td>
<td>92.00</td>
</tr>
<tr>
<td>6</td>
<td>Relate text to personal experience, opinion or evaluation.</td>
<td>92.00</td>
</tr>
</tbody>
</table>
One reading comprehension passage was used in the test. The passage was selected from grade nine Students' Book 2010 (English For Palestine 9), which is taught in the Palestinian schools in the Gaza Strip and the West Bank. The passage talks about the Importance of Plant Life. It was selected from the reading text in Unit 9, Lesson 3&4 page 54. The text has 180 words. Students didn’t study this text and they didn’t have prior knowledge or feedback about it. The items used in each question were equal in weight. These questions were constructed according to the table of specification which was designed according to the general objectives of teaching reading comprehension skills and the relative weight of the skills in the Degree of Importance Questionnaire. The concentration was on the skills which took more than 90% in the relative weight. Three marks were distributed equally for each question. The same test was carried out after the (8) week intervention. Results of the pre and post test were recorded, statistically analyzed and compared.

**Attitudes scale:**

An attitude scale was prepared by the researchers in order to get data and information about the students' attitudes towards reading. This scale was used before and after the experiment for the control and the experimental group. See Appendix (4)

**Description of the scale:**

The scale consists of four domains (Table 2 ). The same scale was carried out before the experiment and after the ten-week intervention. Results of the pre and post scale were recorded, statistically analyzed and compared. A Likert
Type Scoring Format was used in this scale (see table 3). Students were asked to indicate the extent of their agreement with each statement, on a five-point scale from strongly agree to strongly disagree.

Table 1 The attitudes' scale domains

<table>
<thead>
<tr>
<th>Domain</th>
<th>Items No.</th>
<th>Positive sentences</th>
<th>Negative sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Attitudes towards the value and importance of reading</td>
<td>9</td>
<td>1,2,6,7,8,9</td>
<td>3,4,5</td>
</tr>
<tr>
<td>2- Attitudes towards enjoying reading</td>
<td>9</td>
<td>2,4,6,7</td>
<td>1,3,5,8,9</td>
</tr>
<tr>
<td>3- Attitudes towards learning reading via computer</td>
<td>9</td>
<td>1,2,4,7,8,9</td>
<td>3,5,6</td>
</tr>
<tr>
<td>4- Attitudes towards the reading teacher</td>
<td>9</td>
<td>1,2,5,8,9</td>
<td>3,4,6,7</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>21</td>
<td>15</td>
</tr>
</tbody>
</table>

The suggested computer program:

3.4.1 Aims of the computer program:

The general aim of the program is to improve the students reading comprehension skills and develop their attitudes towards reading.

The design of the program

The researchers used some software programs in designing the program as: Microsoft PowerPoint, Internet explorer and Microsoft Word and Ulead Video Maker as well. Pictures, sounds, movements and real videos are used in the design in order to activate the students' interest, attitudes, attention
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and understanding of the text. In addition, the researchers add related activities to each lesson so as to improve the reading comprehension skills. See Appendix (5)

**Content of the computerized program**

The program includes all the reading comprehension lessons in *English for Palestine 9*, Second Term as from Unit 9 to Unit 15, Chart (2). The content of the suggested program was chosen, organized and modified according to the difficulties that students face when reading a text. 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 English and technology teachers. When designing the program, the researcher took into account the abilities and level of the students.

**Program implementation plan:**

Two school periods every week were assigned for each reading lesson. Each lesson needed 45 minutes. The program was implemented in the second semester of the scholastic year 2010-2011 as from 3rd March to 20th May 2011.

**Validity of the program**

The researchers 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 the program. The researchers modified the program according to the referees’ advice and comments. Additionally, the researchers implemented One reading text on a pilot study which consists of (30) students. This step was to investigate if there was any
technological problem, unclear instruction or the suitability of the technological environment.

**Controlling the variables**

To assure the results accuracy and avoid any marginal interference, the researchers tried to control the following variables before the study:

1- Age  
2- General achievement  
3- English general achievement  
4- Previous learning in the English reading comprehension skills  
5- Previous attitudes towards reading

**Chart (2) The content of the computerized program**

<table>
<thead>
<tr>
<th>No.</th>
<th>Unit</th>
<th>The Text Title</th>
<th>Activities</th>
<th>Content of the computerized lesson</th>
</tr>
</thead>
</table>
| 1   | Unit 9, Lesson 3-4, page 54 | Our friends, the forests | Prediction, skimming, scanning synonyms and antonyms, deducing meaning and relation to students' experience and evaluation. | - Pictures for the highlighted words  
- A related video for the text. |
| 2   | Unit 10, Lesson | Quiz: Could       | Prediction, skimming, scanning synonyms                                     | - Pictures for the highlighted words                                                             |
### The Effect of a Computerized Program on Developing Palestinian Ninth Graders' Reading Comprehension Skills and their Attitudes towards Reading

<table>
<thead>
<tr>
<th>Unit</th>
<th>Lesson</th>
<th>Text Title</th>
<th>Activities</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Unit 11, Lesson 3-4, page 60</td>
<td>you look after your home and family?</td>
<td>and antonyms, deducing meaning and relation to students' experience and evaluation..</td>
<td>- A match game for the quiz and its answers.</td>
</tr>
<tr>
<td>3</td>
<td>Unit 11, Lesson 3-4, page 66</td>
<td>Reaching out to others</td>
<td>Prediction, skimming, scanning synonyms and antonyms, deducing meaning and relation to students' experience and evaluation..</td>
<td>- Pictures for the highlighted words - A related video for the text.</td>
</tr>
<tr>
<td>4</td>
<td>Unit 12, Lesson 3-4, page 72</td>
<td>The United Nations at work</td>
<td>Prediction, skimming, scanning synonyms and antonyms, deducing meaning and relation to students' experience and evaluation..</td>
<td>- Pictures for the highlighted words - A related video for the text.</td>
</tr>
<tr>
<td>5</td>
<td>Unit 13, Lesson 3-4, page 78</td>
<td>Help, World!</td>
<td>Prediction, skimming, scanning synonyms and antonyms, deducing meaning and relation to students' experience and evaluation..</td>
<td>- Pictures for the highlighted words</td>
</tr>
<tr>
<td>Unit</td>
<td>Lesson</td>
<td>Text / Source</td>
<td>Description</td>
<td>Additional Resources</td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td>---------------</td>
<td>-------------</td>
<td>----------------------</td>
</tr>
</tbody>
</table>
| 6     | Unit 14, Lesson 3-4, page 84 | *An email from China* | Prediction, skimming, scanning synonyms and antonyms, deducing meaning and relation to students' experience and evaluation. | - Pictures for the highlighted words  
- A related video for the text.  
- The email is introduced through the internet explorer to be checked by students as a web-quest lesson. |
| 7     | Unit 15, Lesson 3-4, page 90 | *Science Magazine* *Talks to* ... | Prediction, skimming, scanning synonyms and antonyms, deducing meaning and relation to students' experience and evaluation. | - Pictures for the highlighted words  
- A related video for the text. |

**Results: Data Analysis**

**The result of the study**
1- The first question is stated as follows:

1- What is the suggested computerized programme which may develop ninth graders' reading comprehension and their attitudes towards reading?

To answer this question, the researchers prepared a computerized program in order to develop students' reading comprehension and their attitudes towards reading. The program includes:

1- Teacher's Guide:

The teacher's guide provides information of the procedures that teachers can use when applying this suggested computerized programme. This guide contains detailed unit plan notes of how to use the program effectively. The objectives of each lesson are clearly identified and the answers for the Program's activities are provided. Appendix (6)

2- Students' Book (the suggested computerized program)

The program includes all the reading comprehension lessons in English for Palestine 9, Second Term as from Unit 9 to Unit 15, Chart (2). The researchers used some software programs in designing the program as: Microsoft PowerPoint, Internet explorer and Microsoft Word. They add pictures for each highlighted word in the text in addition to related videos for each lesson. As well as, he designed the text in unit 14 (Email from China) as a web-quest so as to get students live the experience and interact with the text. Appendix (5)

Teaching Aids:
Several teaching aids were used in the program design as pictures, sounds, different effects as movements, real experience (web-quest) and related videos are used in the design in order to activate the students' interest, attitudes, attention and interaction with the text. In addition, the researchers added related activities to each lesson so as to improve the reading comprehension skills and their attitudes towards reading.

**Evaluation tools**

The researchers used two tools to evaluate the program: the pre and post achievement test, and, the pre and post attitude scale in order to determine their interest of reading from computer. Appendixes (3) and (4)

2- **The First hypothesis is stated as follows:**

1. **There are no statistically significant differences at** $(\alpha \leq 0.05)$ **in the total average score of the post-test between the experimental group and the control group.**

To examine this hypothesis, means and standard deviation of the experimental and the control groups' results on the post-test of reading comprehension skills were computed. The researchers used Independent Samples T-test to measure the significant differences. To interpret this hypothesis, the researchers used T.test independent sample results of differences between experimental and control group in the post test.

**Table (3) t.test independent sample results of differences between the experimental and the control group in the post test.**
The Effect of a Computerized Program on Developing Palestinian Ninth Graders' Reading Comprehension Skills and their Attitudes towards Reading

<table>
<thead>
<tr>
<th>Skill</th>
<th>GROUP</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t</th>
<th>Sig. value</th>
<th>sig. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prediction</td>
<td>experimental</td>
<td>30</td>
<td>2.650</td>
<td>0.852</td>
<td>2.669</td>
<td>0.010</td>
<td>sig. at</td>
</tr>
<tr>
<td></td>
<td>control</td>
<td>30</td>
<td>1.850</td>
<td>1.403</td>
<td></td>
<td></td>
<td>0.05</td>
</tr>
<tr>
<td>Skimming</td>
<td>experimental</td>
<td>30</td>
<td>2.567</td>
<td>0.626</td>
<td>3.147</td>
<td>0.003</td>
<td>sig. at</td>
</tr>
<tr>
<td></td>
<td>control</td>
<td>30</td>
<td>1.933</td>
<td>0.907</td>
<td></td>
<td></td>
<td>0.01</td>
</tr>
<tr>
<td>Scanning</td>
<td>experimental</td>
<td>30</td>
<td>2.067</td>
<td>0.868</td>
<td>3.828</td>
<td>0.000</td>
<td>sig. at</td>
</tr>
<tr>
<td></td>
<td>control</td>
<td>30</td>
<td>1.233</td>
<td>0.817</td>
<td></td>
<td></td>
<td>0.01</td>
</tr>
<tr>
<td>Synonyms and antonyms</td>
<td>experimental</td>
<td>30</td>
<td>1.533</td>
<td>0.629</td>
<td>2.587</td>
<td>0.012</td>
<td>sig. at</td>
</tr>
<tr>
<td></td>
<td>control</td>
<td>30</td>
<td>1.000</td>
<td>0.938</td>
<td></td>
<td></td>
<td>0.05</td>
</tr>
<tr>
<td>Deduce meaning from context</td>
<td>experimental</td>
<td>30</td>
<td>1.700</td>
<td>0.877</td>
<td>4.021</td>
<td>0.000</td>
<td>sig. at</td>
</tr>
<tr>
<td></td>
<td>control</td>
<td>30</td>
<td>0.850</td>
<td>0.756</td>
<td></td>
<td></td>
<td>0.01</td>
</tr>
<tr>
<td>Relate text to personal experience</td>
<td>experimental</td>
<td>30</td>
<td>1.667</td>
<td>0.959</td>
<td>2.819</td>
<td>0.007</td>
<td>sig. at</td>
</tr>
<tr>
<td></td>
<td>control</td>
<td>30</td>
<td>1.000</td>
<td>0.871</td>
<td></td>
<td></td>
<td>0.05</td>
</tr>
<tr>
<td>Total score of the test</td>
<td>experimental</td>
<td>30</td>
<td>12.183</td>
<td>2.503</td>
<td>5.604</td>
<td>0.000</td>
<td>sig. at</td>
</tr>
<tr>
<td></td>
<td>control</td>
<td>30</td>
<td>7.867</td>
<td>3.396</td>
<td></td>
<td></td>
<td>0.01</td>
</tr>
</tbody>
</table>

“t” table value at (58) d f. at (0.05) sig. level equal 2.00
“t” table value at (58) d f. at (0.01) sig. level equal 2.66

The results in table (3) indicate that the (t) computed value was greater in all the skills and in the total score of the post test than the (t) table value in the post test. This means that there are significant differences at (α= 0.01) and (0.05) between the experimental group and the control one favouring the experimental group. There is also a significant difference between the means of both groups in favour of the experimental group. Whereas the mean of the control group was (7.867) in relation to the total score of the test and the mean of the experimental group was (12.183). That means that
the Computerized program was effective to develop the reading comprehension skills under investigation.

Table (4) "t" value, eta square " $\eta^2$", and "d" for each skill and the total score

<table>
<thead>
<tr>
<th>Skill</th>
<th>t value</th>
<th>$\eta^2$</th>
<th>d</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prediction</td>
<td>2.669</td>
<td>0.109</td>
<td>0.701</td>
<td>Medium</td>
</tr>
<tr>
<td>Skimming</td>
<td>3.147</td>
<td>0.146</td>
<td>0.826</td>
<td>Large</td>
</tr>
<tr>
<td>Scanning</td>
<td>3.828</td>
<td>0.202</td>
<td>1.005</td>
<td>Large</td>
</tr>
<tr>
<td>Synonyms and antonyms</td>
<td>2.587</td>
<td>0.103</td>
<td>0.679</td>
<td>Large</td>
</tr>
<tr>
<td>Deduce meaning from context</td>
<td>4.021</td>
<td>0.218</td>
<td>1.056</td>
<td>Large</td>
</tr>
<tr>
<td>Relate text to personal experience</td>
<td>2.819</td>
<td>0.120</td>
<td>0.740</td>
<td>Medium</td>
</tr>
<tr>
<td>Total score of the test</td>
<td>5.604</td>
<td>0.351</td>
<td>1.472</td>
<td>Large</td>
</tr>
</tbody>
</table>

Table (4) shows that there is a large effect size for each skill and the total score of each skill.
Implementing the effect size equation, the researchers found that the effect size of four skills namely: synonyms and antonyms, Deduce meaning from context, skimming and scanning is large. This could be attributed to the pictures shown within the computerized programme as these pictures are clear and completely related to the vocabulary. In addition, Students can deduce the meaning of words from the context especially after watching related videos about the lessons. It's noticed from table (4) that the effect size of the skills: predicting and relating the text to experience is medium, but it is close to being large because the total score of all the skills is large. This may be attributed to the fact that these skills are high-order thinking skills and require the subjects to use new language which they haven’t learnt before. Besides, students in the Palestinian environments and due to cultural influence were not trained to express their viewpoints because the Palestinian society is reserved and young people are expected to conform to the views of their elders. More importantly, the Palestinian educational system does valuate this value.

The Second hypothesis is stated as follows:

2- There are no statistically significant differences at $\alpha \leq 0.05$ in the total average score of the post attitude scale between the experimental group and the control group.

To examine this hypothesis, means and standard deviation of the experimental and the control groups' results on the post-attitude scale towards reading were computed. The researchers used Independent Samples T-test to measure the significant differences. To interpret this hypothesis,
the researchers used T.test independent sample results of differences between experimental and control group in the post attitude scale.

**Table (5) t.test independent sample results of differences between experimental and control group for all domains and total score of the domain**

<table>
<thead>
<tr>
<th>Domain</th>
<th>GROUP</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t</th>
<th>Sig. value</th>
<th>sig. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes towards the value and</td>
<td>experimental</td>
<td>30</td>
<td>38.900</td>
<td>2.695</td>
<td>20.083</td>
<td>0.000</td>
<td>sig. at 0.01</td>
</tr>
<tr>
<td>importance of reading</td>
<td>control</td>
<td>30</td>
<td>21.567</td>
<td>3.884</td>
<td>17.539</td>
<td>0.000</td>
<td>sig. at 0.01</td>
</tr>
<tr>
<td>Attitudes towards enjoying reading</td>
<td>experimental</td>
<td>30</td>
<td>38.167</td>
<td>3.302</td>
<td>20.422</td>
<td>0.000</td>
<td>sig. at 0.01</td>
</tr>
<tr>
<td></td>
<td>control</td>
<td>30</td>
<td>21.633</td>
<td>3.970</td>
<td>17.539</td>
<td>0.000</td>
<td>sig. at 0.01</td>
</tr>
<tr>
<td>Attitudes towards learning reading</td>
<td>experimental</td>
<td>30</td>
<td>38.267</td>
<td>2.612</td>
<td>20.946</td>
<td>0.000</td>
<td>sig. at 0.01</td>
</tr>
<tr>
<td>via computer</td>
<td>control</td>
<td>30</td>
<td>20.600</td>
<td>3.953</td>
<td>20.946</td>
<td>0.000</td>
<td>sig. at 0.01</td>
</tr>
<tr>
<td>Attitudes towards the reading teacher</td>
<td>experimental</td>
<td>30</td>
<td>40.067</td>
<td>2.532</td>
<td>20.946</td>
<td>0.000</td>
<td>sig. at 0.01</td>
</tr>
<tr>
<td></td>
<td>control</td>
<td>30</td>
<td>20.200</td>
<td>4.536</td>
<td>20.946</td>
<td>0.000</td>
<td>sig. at 0.01</td>
</tr>
<tr>
<td>Total score of the scale</td>
<td>experimental</td>
<td>30</td>
<td>155.400</td>
<td>6.021</td>
<td>34.167</td>
<td>0.000</td>
<td>sig. at 0.01</td>
</tr>
<tr>
<td></td>
<td>control</td>
<td>30</td>
<td>84.000</td>
<td>9.734</td>
<td>34.167</td>
<td>0.000</td>
<td>sig. at 0.01</td>
</tr>
</tbody>
</table>

“t” table value at (58) d f. at (0.05) sig. level equal 2.00
“t” table value at (58) d f. at (0.01) sig. level equal 2.66

The findings in table (5) show that the (t) computed value was larger in all domains and in the total score of the attitude scale than the (t) table value in the post attitude scale. This means that there are significant differences at
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(\alpha= 0.01) and (0.05) between the experimental group and the control one favouring the experimental group. There is also a significant difference between the means of both groups in favour of the experimental group. Whereas the mean of the control group was (84.000) in relation to the total score of the test and the mean of the experimental group was (155.400). That means that the Computerized program was able to improve the students' attitudes towards reading.

Table (6) The Effect Size of the computerized program on the experimental, group post-attitude scale towards reading.

"t" value, eta square \( \eta^2 \), and "d" for each domain and the total score

<table>
<thead>
<tr>
<th>Domain</th>
<th>t value</th>
<th>( \eta^2 )</th>
<th>d</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes towards the value and importance of reading</td>
<td>20.083</td>
<td>0.874</td>
<td>5.274</td>
<td>Large</td>
</tr>
<tr>
<td>Attitudes towards enjoying reading</td>
<td>17.539</td>
<td>0.841</td>
<td>4.606</td>
<td>Large</td>
</tr>
<tr>
<td>Attitudes towards learning reading via computer</td>
<td>20.422</td>
<td>0.878</td>
<td>5.363</td>
<td>Large</td>
</tr>
<tr>
<td>Attitudes towards the reading teacher</td>
<td>20.946</td>
<td>0.883</td>
<td>5.501</td>
<td>Large</td>
</tr>
</tbody>
</table>
Table (6) shows that there is a large effect size for each domain and the total score of each domain.

Obviously, the effect size of the attitude scale in each domain and in the total score of the scale is large. This could be because of the technological environment in which students are involved. Moreover, students work on their own computers alone as they could read the text more than once and they could search for the answers of the assigned questions.

Summary

After analyzing the data of the test and the attitude scale statistically, it is obvious that there are significant differences in developing the reading comprehension skills and the attitudes towards reading between students in the experimental group and their counterparts in the control one in favor of the experimental group. The results of the study indicate that students in the experimental group were more aware of the reading comprehension skills. In addition, the students who studied reading via computer became more successful in answering the reading comprehension questions. This may be due to the pictures, sounds and videos used in the computer program. As well as, the technological environment in which students were involved in.
Concerning the computer and its effect on developing reading, the results of the current study agree with those of several related studies as: Baniabdelrahman (2010) in his study which investigated the effect of using a computerized package on EFL students' achievement in reading. The findings of this study revealed a significant difference in reading comprehension between the two groups, regardless of gender, in favor of the experimental group taught using the computerized package. Similarly, Siddiqi (2007) examines the effect of using computer-assisted semantic mapping on the achievement of EFL students in reading comprehension at the second year in secondary school in Makkah. The results were positive in developing the reading comprehension through computer.

Regarding the computer and its effect on students' attitudes towards reading via computers, the results of the current study agree with the results of several related studies as: Ates et al (2006) confirmed that computer based learning develops the students' attitudes towards reading and computer. In the same concern, Fang (2010) clarified the effect of multimedia through (CALL) to motivate EFL students' interest in English language learning including reading.

According to the study results, reading through computer is more effective than reading from textbooks. Also, computer helps students interact with the text effectively and it develops students' attitudes toward reading.

Discussion

The researchers investigated the first research question which is about the suggested computerized program to develop the reading comprehension skills and students' attitudes towards reading. This question results agree with many studies as: Chen (2011) who conducted a study in order to
evaluate the effectiveness of the design of using a computer program namely Quick Response (QR) codes to provide students direct access to pre-designed digital materials and the use of scaffolded questioning in promoting students’ reading comprehension. The results of this study indicated the effectiveness of the designed program in promoting students' reading comprehension. Similarly, Yang (2010) in his study suggested a design of an online reciprocal teaching and learning system to support teachers and students in college remedial reading instruction. The results showed that the online program had positive effect on the reading instruction.

The suggested program was taught to the experimental group while the control one was taught by the traditional method (textbooks). After that, the post-test was applied on the two groups and the results were statistically analyzed. Finally, the results of the study indicated that the suggested computerized program was effective in developing students' reading comprehension and improved their attitudes towards reading. The contents of the computerized program were chosen, organized and modified according to the opinions and suggestions of a group of specialists in this field.

Additionally, The researchers noticed that the program improves the high-achievers' attitudes towards reading to the interesting design of the program that enables the high-achievers to be more motivated and active in the reading class compared with the traditional reading class. No study investigated the role of computers on the development of the high-achievers attitudes towards reading and computer, but they clarified the role of
computers on the students' motivation and attitudes towards learning in general and reading in particular.

Similarly, None of the studies investigated the role of computers on the development of the high-achievers reading comprehension, but they handled the role of this technology on the students' reading comprehension in general. The researchers attribute the effectiveness of the program on the high-achievers’ reading comprehension to designing several activities that suit the high-achievers and enable them to work effectively, providing the high-achievers to read or re-read the text whenever they need and providing competitions between groups improved high-achievers' ability to interact with the text effectively.

In the same concern, The researcher didn’t find any study examining the role of computers on the development of the low-achievers attitudes towards reading and computer, but they clarified the role of computers on the students' motivation and attitudes towards learning in general and reading in particular. This is clear in many studies as: Owston et al (2009), Lim (2006) Dreyer & Nel (2003) and Christensen (2002), which confirmed the role of computer technology and the technological environment on improving students' attitudes towards learning and motivation to read. The researchers attribute the effectiveness of the program to:

- The suitability of many activities for the low-achievers' level which provides them with immediate feedback.
- The clarity of the pictures in presenting the vocabulary.
- The clarity of the videos where each video includes different types of effects as pictures, sentences describing pictures and actions in
addition to the music included in each video that gets students use their perspectives to think effectively.

✓ Providing solutions to the reading difficulties.
✓ Involving students in a technological environment (the computer laboratory) enables them to feel more motivated to use computers.
✓ The suitability of many activities for the low-achievers.
✓ Using an exciting method for the low-achievers with colours, movements and videos and this method differs from the traditional method in teaching reading.
✓ The facilities that are presented by computers to enable the low achievers to feel self-confident.

Conclusion

The findings of the study hypotheses can be summarized as follows:

1. The finding of the first question showed that there were statistically significant differences at (α ≤ 0.05) in the total average score of the post-test between the experimental group and the control group.
2. The finding of the second question revealed that there were statistically significant differences at (α ≤ 0.05) in the total average
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score of the post attitude scale between the experimental group and the control group. Furthermore, the researchers examined the effect size of the program which was large in all the results. Consequently, it can be concluded that the computer has a positive effect on the students' reading comprehension skills and their attitudes towards reading.

Pedagogical Implications

In the light of the study results, the researchers suggest the following:

1- Teachers should be aware of the importance of the computer in developing students' reading comprehension skills as the traditional method in teaching reading is less effective.

2- Using computers enables students to develop their attitudes towards learning in general and reading in particular.

3- Using computers enables students with reading disabilities overcome their disability.

4- Computerized instruction motivates students to read and re-read the text, thus, teachers should encourage students to read via computers.

5- Low-achievers feel relaxed and motivated when using computers, so teachers should include suitable activities which fits their ability.

Recommendations

The researchers recommend that: Teachers

1- should think of designing other computerized programs related to other skills as writing, speaking and listening.

2- should pay more attention to the different comprehension skills.
3- should use computers to improve students' comprehension and critical thinking.
4- should enrich the syllabus with computerized activities that enable students to feel motivated so as to develop their attitudes towards enjoying reading.
5- should attend the training courses that enable them to use modern methods in teaching like integrating technology.

Course designers
1- should include a new method in teaching English for Palestine depending on computers.
2- should provide the syllabus with self-learning strategy using computers in order to get students learn by their own at home.

Supervisors
1- should train teachers to use computers in the learning process as making Web-Quests, using internet and designing programs.
2- Should get teachers computerize the lessons to fit the students' abilities and enables them to interact with the lesson effectively.

Recommendations for further studies
Further researches may be taken in consideration as follows:
1- A study should be Conducted based on computer-based-learning so as to develop other skills as listening, speaking and writing.
2- A follow-up study should be conducted to examine the effect of the computerized programs on students with reading disabilities.
3- Conducting studies investigating difficulties facing teachers and students when using computers.
Finally, a study needs to be done to investigate the impact of computer-based-learning on speed reading and the proficiency of using pauses while reading.

5- References


The Effect of a Computerized Program on Developing Palestinian Ninth Graders' Reading Comprehension Skills and their Attitudes towards Reading


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