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جامعة الإمارات العربية المتحدة
United Arab Emirates University

United Arab Emirates University

College of Education

Curriculum & Instruction Department

COMPUTER-ASSISTED LANGUAGE LEARNING (CALL) IMPACT
ON STUDENTS' READING ACHIEVEMENT AND THEIR
ATTITUDE TOWARDS ITS USE

Ayeda Abdulla Saeed Al Shebli

This thesis is submitted in partial fulfillment of the requirements for the degree of
Master of Education (Curriculum and Instruction)

Under the Supervision of Dr. AbdurRahman AlMekhlafi

December 2014

Declaration of Original Work

I, Ayeda Abdulla Saeed Al Shebli, the undersigned, a graduate student at the United Arab Emirates University (UAEU), and the author of this thesis entitled "*Computer-Assisted Language Learning (CALL) impact on students' reading achievement and their attitude towards its use*", hereby, solemnly declare that this thesis is an original research work that has been done and prepared by me under the supervision of Dr. AbdurRahman AlMekhlafi, in the College of Education at UAEU. This work has not been previously formed as the basis for the award of any academic degree, diploma or a similar title at this or any other university. The materials borrowed from other sources and included in my thesis have been properly cited and acknowledged.

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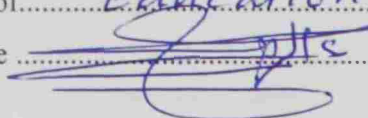
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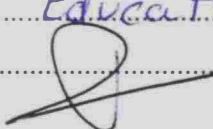
1) Advisor (Committee Chair):

Title..... Dr. Abdurrahman Almekhlafi
Department of..... C. & I
College of..... Education
Signature.....  Date..... 25.2.2015

2) Member : Dr. Qasim Alshannog

Title..... Associate professor
Department of..... Curriculum & Instruction
College of..... Education
Signature.....  Date..... 26.2.2015

3) Member

Title..... Ali Al Kaabi
Department of.....
College of..... Education
Signature.....  Date..... 1-3-2015

4) Member (External Examiner):

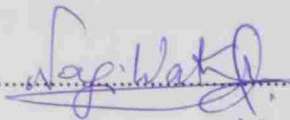
Title..... N/A
Department of.....
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This Master Thesis is accepted by:

Dean of the College of

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Abstract (in English)

This study sought to investigate the effects of computer-assisted language learning (CALL) on students' reading achievement, and students' attitudes toward the use of CALL. Two groups of grade 7 students participated in this study. At the beginning of the study, both groups were given a pretest to evaluate these students' reading skills. In the control group, students were taught through ordinary instruction. On the other hand, in the experimental group; students used CALL to practice their reading skills. At the end of the treatment, both groups were given a posttest in order to determine whether there was any difference in their reading achievement. Then, the experimental group completed a questionnaire in order to provide data on their attitudes toward the use of CALL. Results showed a significant difference between the experimental and the control groups in favor of students who learned and practiced reading skills through CALL instruction. Furthermore, the results of the questionnaire completed by the group that used CALL showed that students had positive attitudes toward the use of CALL.

Keywords: Attitudes; CALL; English Education; Grade 7; Reading Achievement; UAE

تأثير برامج الحاسوب التعليمية على تحصيل الطلبة في مهارة القراءة ووجهات نظرهم في

استخدامها

المخلص

سعت هذه الدراسة إلى اكتشاف تأثير برامج الحاسوب التعليمية على تحصيل الطلبة في مهارة القراءة ووجهات نظرهم في استخدامها. شاركت مجموعتان من طلبة الصف السابع في هذه الدراسة. في بداية الدراسة أعطيت المجموعتان اختبار (ما قبل الاختبار) لتقييم مهارات الطالبات في القراءة. في المجموعة الضابطة، تم تعليم الطلبة من خلال التعليم العادي. من ناحية أخرى، في المجموعة التجريبية. استخدم الطلبة برامج الحاسوب التعليمية لممارسة مهارات القراءة لديهم. في نهاية العلاج، أعطيت كلا المجموعتين اختبار (بعد الاختبار) البعدي من أجل تحديد ما إذا كان هناك اختلاف في تحصيل الطلبة في مهارات القراءة. ثم، أكملت المجموعة التجريبية استبيان من أجل توفير بيانات عن مواقفهم تجاه استخدام برامج الحاسوب التعليمية.

أظهرت النتائج اختلافاً بين المجموعتين من ناحية تحصيلهم في مهارات القراءة لصالح المجموعة التجريبية التي استخدمت برامج الحاسوب التعليمية. وعلاوة على ذلك، أظهرت نتائج الاستبيان أن وجهات نظر الطلبة في استخدام برامج الحاسوب التعليمية ايجابية.

كلمات البحث: برامج الحاسوب التعليمية، تحصيل مهارات القراءة، تعليم اللغة الانجليزية، الصف السابع،

وجهات نظر الطلبة، الامارات العربية المتحدة

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Most of all, I want to express my appreciation and sincere love to my family. without their support and encouragement, I would not have been be able to complete it.

Dedication

To everyone who supported me in this study to make it possible

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Chapter 1: Introduction

This chapter presents the background of the study, research problem, research questions, rationale, hypotheses, purpose of the study, significance of the study, limitations of the study, definition of terms used in the study, and summary.

Background of the Study

Since 2009, Abu Dhabi Education Council (ADEC) has attempted to integrate technology into the classroom in order to create a technology-rich environment for learners and to enhance teaching and learning. The purpose of integrating technology into the classroom is to promote student-centered learning based on the ADEC's vision and mission. ADEC has started introducing teachers to different technological devices and provide them with adequate training to help them use technology effectively in their classrooms in order to improve the quality of teaching and learning. One important tool teachers can use in English classrooms is computer-assisted language learning (CALL). This study focused on using CALL to test its effect on students' learning achievement and whether it can help students improve their mastery of a second language.

Methods of teaching language skills have changed as technology has been introduced into the teaching and learning process. Since the late 20th century, many new technologies have been introduced into education such as computers. Computers have been used in education to enhance teaching methods and to provide teachers and learners with modern tools that support the teaching and learning process. The introduction of computers into language classrooms has changed the way teachers teach and the way learners learn. In addition, the presence of computers in the classroom has changed students' learning style and the classroom environment.

"Technology provides a motivating learning environment whereby learners are given the opportunity to be constructively engaged with instruction" (Jhurree, 2005, p.469).As a result, computers have become an important element in almost every classroom .

CALL programs help students to be active instead of passive during instruction. "Computers will allow students to take charge of their own learning through direct exploration, expression, and experience" (Muir-Herzig, 2004, p.115). Computers allow students to interact and practice their language skills. CALL has been used for over 40 years in the modern countries at that time. It was first implemented during the 1960s and went through three important iterations: behaviorist CALL, communicative CALL, and integrative CALL. In the first iteration, behaviorist CALL, computers were used as tutors for repetitive drill practice programs. In the second iteration (communicative CALL), computer games were used to improve learners' skills. In the last iteration (integrative CALL), multimedia computers were used as assistants for students, helping them to perform tasks. "These technological developments have brought text, graphics, sound, animation and video to be accessed on a single inexpensive computer. These resources are all linked and called "hypermedia", enabling learners to navigate through CD-ROMS and the Internet at their own pace and path, using a variety of media" (Meihami & Varmaghani, 2013, p.51)

A number of studies have focused on the importance of integrating CALL into language classrooms by testing its effectiveness (e.g., Chapelle, 2009; Davies, 2002; Gündüz, 2005; Jayachandran, 2007; Joshi, 2010; and Olibie, 2010).

Davies (2002) did not find any interaction between learners and context in language lab drills. With CALL programs, however, there is an interaction but no teacher intervention, which leads to independent learning. According to Gündüz (2005), the use of CALL was limited for several years because of a lack of teachers who designed and used the programs. Most often, programs such as Microsoft Word and PowerPoint were used for teaching and learning. Today, educators and technology researchers are working to enhance the quality of CALL programs and tailor them to all types of learners. Moreover, Jayachandran (2007) found that “computers have emerged as fascinating technological tools in the educational arena.” In addition, he stated that the use of computers in classrooms as a tool for teaching is highly significant for language learning. Likewise, Chapelle (2009) indicated, “The emphasis in CALL today is on the pragmatic goal of marshaling professional knowledge in a manner that is useful for creating learning opportunities and demonstrating successful learning.” Also, he stated that in CALL classrooms, low achievers can catch up with tasks when they move slowly and high achievers can take on extra tasks. “CALL provides an individual interactive learning program, so both the ‘fast’ and ‘slow’ learners can take benefit from it” (Abu Naba'h, 2012, p.72) In addition, some CALL programs record the achievements of students, and teachers can use these records to assess students’ improvement and to identify their weaknesses.

Furthermore, Joshi (2010) stated that CALL has important learning features such as bidirectional learning and individualized learning. Also, CALL uses a variety of structured language activities and games designed to meet learners’ needs at several levels. CALL was developed when language teachers moved from teacher-centered to student-centered instruction; therefore, it was theorized that CALL would help create independent learners. Furthermore, CALL offers a certain degree of

independence for learners to learn in the manner they prefer. Moreover, Olibie (2010) stated, "The critical role that computers play in English language teaching and learning is best understood in terms of computer assisted language learning".

CALL is an area of applied linguistics with a long history. It focuses on several distinct language skills including reading, writing, speaking, and listening. Reading is an important skill in any language classroom. Often, teachers and learners focus on speaking and writing skills but neglect reading skills. This creates weaknesses in students' reading comprehension. In CALL programs, reading comprehension passages are presented in various ways to hold learners' attention. These programs offer students different types of texts based on their learning preferences.

Statement of the Problem

Reading is one of the skills ADEC insists teachers focus on in the English curriculum. "Reading in a foreign language is a very useful and relatively painless way to improve the command over the target language" (Sadeghi & Soltanian, 2010). However, many second-language learners face challenges when learning their target language. "Many learners of English as a foreign language have major difficulties with reading comprehension" (Marzban, 2010). Nezami, 2012 studied reading problems that second language learners face. He concluded that students are weak in reading for several reasons. First, they avoid reading because of the lack of their vocabulary knowledge. Second, spelling and pronunciation could make the meaning of the context irrelevant while students read. Finally, students do not read with partners, though reading in pairs or groups could help them improve their reading skills. From the researcher experience in teaching students may perform poorly in

reading because they do not pay attention to reading as a skill; instead they focus on speaking. Furthermore, students may face reading problems due to either lack of appropriate reading resources or lack of knowledge about how to use different reading strategies.

Although ADEC concentrates heavily on reading, students' proficiency in reading is still very limited. Most students do not meet ADEC goals based on the EMSA results in the past four years. "Reading provides rich and abundant samples of L2 input, which is needed to improve learners' overall language proficiency" (Pang, 2008, p.14). Although reading should play an important role within such a language curriculum, the training of this skill is still often neglected within second language classroom instruction" (Marzban, 2011, p.9)." Reading comprehension is arguably the most important skill a child learns. Learning to be a strategic, active and systematic reader is important for success in all content areas" (Nezami, 2012, p. 307).

As a solution, CALL may help students enhance their reading skills. "CALL has important potential for English language teaching" (Barani, 2013, p.536). " Using CALL materials in reading comprehension classes the students could make benefits of that and improve their reading comprehension" (Meihami & Varmaghani, 2013, p.56). " One of the most important aspects of using CALL in the classroom is that students are free from anxiety and there is no peer pressure which inhibits them from language learning easily" (Marzban, 2011, p.9). "Educational technology promises to democratize learning, increase access to multiple information resources, decentralize instruction, and remove hierarchies in communication and interaction in English language learning classrooms" (Brennan, 2009). "Unlike a conventional foreign language classroom with mainly group-based learning, CALL provides personalized learning and instruction" (Jee & Kim, 2012). CALL materials include

various activities that students can use to improve their language skills. "Interventions delivered via computer allow activities to be presented in a highly structured and systematic fashion, including corrective feedback" (Macaruso & Rodman, 2011). Therefore, it is worth exploring and investigating the impact of CALL on students' reading achievement and their attitudes toward it.

Purpose of the Study

The purpose of this study was to answer four research questions and to test four hypotheses in order to determine the impact of CALL on students' achievement in reading and their perspectives on CALL.

In order to assess ways to enhance students' reading proficiency, this study measured whether using CALL affected students' achievement in reading and improved students' reading skills. "The use of technology in education can no longer be thought of as a choice to be made on the part of teachers, nor can it be considered an add-on to the curriculum or reserved for special occasions in the classroom" (DelliCarpini, 2012). In a study of CALL and reading comprehension, Meihami and Varmaghani (2013) found a significant difference in students' results from pretest to posttest. In addition, Blake (2009) stated that when students use CALL independently, they achieve more than when they study in groups .

To make learning English as a second language more enjoyable and effective for learners, educators recommend using the modern technology available to them. "Classroom teaching becomes more effective with the help of computers" (AbuSeileek & Abu Sa'aleek, 2012, p.26). "The use of the computer in and of itself does not constitute a teaching method, but rather the computer forces pedagogy to think in new ways to exploit the computers benefits and work around its limitations"

(Barani, 2013, p.532). To maximize the impact of technology, it is important to compare the results or outcomes of traditional classroom learning and CALL classroom learning. Such research can be used to clarify students' attitudes toward both types of learning.

Research Questions and Hypotheses

The research questions for this study were as follows:

1. To what extent can CALL affect students' achievement in reading?
2. How do students (in the experimental group) perceive using CALL?
3. Is there a significant difference between students' results due to the amount of time they use CALL at home?
4. Is there a significant difference between students' results due to their expertise in using computers?

In order to answer the research questions, the following null hypotheses were generated:

1. There is no significant difference between using ordinary methods in teaching and using CALL in terms of students' achievement in reading.
2. Students' attitudes toward CALL tend to be negative.
3. There is no significant difference in terms of students' achievement in reading due to the amount of time they use CALL at home.
4. There is no significant difference in terms of students' achievement in reading due to their expertise in using computers.

Significance of the Study

In order to improve students' second-language skills, CALL can be used as an alternative tool for ordinary teaching methods. "Technology provides people in the area of education with limitless opportunities" (Kayaoğlu, Dağ akbaş, & Öztürk, 2011, p. 24). "CALL has been taking advantage of advanced technological facilities to create the highest interactive learning environments for activities that develop listening, speaking, reading, and writing skills" (Jafarian, Soori, & Kafipour, 2012). Researchers such as Almekhlafi (2006), Barani (2013), Bhatti (2013), and Marzban (2010) recommended that CALL software programs be imposed in language classes because they can play an important role in improving reading skills for some students .

There is no guarantee that CALL can help all students. However, studies on the effectiveness of CALL conducted by Macaruso and Rodman (2011), Meihami and Varmaghani (2013), and Sadeghi and Soltanian (2010) indicated that CALL can provide students with opportunities to build on their own learning. CALL uses a variety of resources, materials, activities, and games to give students the chance to learn in the way they prefer. This study was designed to determine the effects of CALL on students' achievement in reading. There is a need for research like this in the United Arab Emirates (UAE) in order to determine the best ways to improve learners' reading skills.

Operational Definition of Terms

Based on this research study and the literature review, there were important operational terminologies used. Therefore, the following operational definitions were defined to achieve the purpose of the study.

CALL refers to computer-assisted language learning, which uses different software programs to teach languages. CALL is considered as a tool for learning. “CALL programs are automatic guided lessons. They teach the language in different and more interesting, attractive ways and present language through games, animated graphics and problem solving techniques” (Joshi, 2010). In this study, CALL refers specifically to Merit, an interactive reading program that focuses on different reading skills. Based on the positive reviews on the Merit website, the researcher chose Merit as the instrument for determining the effect of using CALL in improving reading skills. Through CALL classroom students use the software in the computer lab and the teacher is there to guide and support them technically while they are using the software

Merit software was created in 1983. “Merit programs include pre-assessment, comprehension guides, comprehension practice, post-assessment, record keeping of individual student responses, and time-on-task indicators” (Jones et al., 2004

L2 refers to a second language that a student is learning and is “generally used to identify a language that is not a speaker’s native language” (Shaw, 2010). In this study, L2 refers to the English language, which is used in the United Arab Emirates public schools.

Reading skills are processes of “intentional thinking during which meaning is constructed through interactions between text and reader” (Durkin, 1993). In this study, reading skills refer to skimming; scanning; predicting; identifying general ideas and details; and recognizing sequences, grammar, and texts; critically thinking and reflecting; and drawing conclusions.

Reading achievement is “the ability to decode written language to gain information” (Beaird, 2007). This term is used to refer to the students’ results on the achievement reading exam that deployed in this study.

Ordinary methods of teaching refer to teaching that consists of direct and explicit, teacher-centered instruction. In this study, ordinary methods of teaching were used with the control group. The teacher reads the texts with students, explains, asks questions, gives feedback, and evaluates students' performance.

External Measure of Student Achievement (EMSA) is a standardized test designed by ADEC to measure students’ achievement in English language in public schools. In this study, EMSA refers to the instrument (exam) used in the pretest and posttest. This type of test includes different reading texts about different topics followed with a number of multiple choice questions.

Organization of the Study

This research is organized and presented in five chapters. The first chapter introduces the problem and presents information and theories about using CALL in language classrooms and about the role of CALL in enhancing reading skills. The problem addressed in this study is students’ limited and poor proficiency in reading. Chapter 1 also states the purpose of the study, significance of the study, research questions, limitations, and terms used. Chapter 2 presents a review of the literature related to the research topic and problem. Chapter 3 provides an explanation of the methods and procedures used during the research. Chapter 4 states the results and findings of the pretest and posttest and the questionnaire used in this study. Finally, Chapter 5 reports the discussion, conclusions, and recommendations

Limitation of the Study

The limitations of this study can be summarized in two main points:

1. All students in this study were female, as the study was conducted in a girls' school. Thus, the results cannot be generalized to all Cycle 2 female and male students
2. This study focused on only one skill—reading. Therefore, the results cannot be generalized to all language skills .

Chapter 2: Literature Review

Introduction

The purpose of this chapter is to introduce the literature related to CALL and the effects of CALL on students' reading achievement and cognitive style. This chapter presents an overview of studies on CALL and language learning (specifically reading). The chapter reviews and summarizes studies that cover the period from 2002 to 2013. The following topics are addressed: (a) technology and education, (b) CALL in language learning and teaching, (c) language skills and CALL, (d) reading strategies, (e) reading and CALL, (f) attitude towards the use of CALL, and (g) theoretical framework.

Technology and Education

Computers have been used in education for several decades to enhance teaching methods and provide teachers and learners with modern tools that support the teaching and learning process. Today, the expansion of technology has had a significant impact on everyday life. "Technology is a predominant facet of everyday life in the more developed nations of this world and it is the way of the future for nearly every economically developing country" (Shaw, 2010). Technology has been integrated into the home, the workplace, the government, education, science, and communications .

Researchers have agreed that technology can play an important role in education (Amiel & Reeves, 2008; Christensen, 2002; Gündüz, 2005; Halverson & Smith, 2009; Jhurree, 2005; Muir-Herzig, 2004; Naba'h, Hussain, Al-Omari, & Shdeifat, 2009; Ross, Morrison, & Lowther, 2012; Wood, Zivcakova, Gentile, Archer,

De Pasquale, and Nosko, 2012; and Zaho, 2003, 2012). Christensen (2002) found that using computers in education has had a positive impact on teachers. Teachers' confidence in using computers may affect their implementation of technology and their methods and techniques of teaching in the classroom. According to Zaho (2003), the role of technology in education could enhance teachers' efficiency in preparing, organizing, and presenting lessons. When planning to use technologies, teachers must keep in mind the organization of time and what they will do in each stage. Also, they must understand that technology is an ill-defined concept that includes a variety of tools, artifacts, practices, media, websites, video, and conferencing and chat software.

Muir-Herzig (2004) found that computers also give students opportunities to take charge of their own learning. When students start learning with computers on their own, they make new discoveries and have a variety of experiences that can enhance their performance. The integration of technology in classrooms, however, depends on the teacher (Muir-Herzig, 2004). Gündüz (2005) stated that computers can be used as the mainstay of any course, revision, or reinforcement. Moreover, the availability of computers in classrooms does not mean that teachers and students use them effectively. If students and teachers do not know how to use computer programs, computers become useless tools in the classroom. Some teachers do not like to use computers because they think it is a waste of their time and that they have limited time to cover the curriculum. Without carefully choosing and preparing materials, planning lessons, managing the classroom, and training learners and teachers, computers are useless. "The amount of confidence a teacher possesses in using computers and related information technologies may greatly influence his or her effective implementation of technology methods in the classroom" (Christensen,

2002). "Another valuable role of technology is increasing teachers' effectiveness in organizing and presenting lessons" (Zaho, 2003).

However, Jhurree (2005) found that using technology for education has a significant positive impact on the educational process in terms of creating a good learning environment. It is also a good tool for teachers to use to improve their teaching. Amiel and Reeves (2008) found the use of technology in education tend to be a solution to the inadequacies of traditional methods of teaching. The most commonly used technologies in classrooms are computers and the Internet, and many educators still think the power of the Internet and computers can be used to change the way educators teach and students learn .

Furthermore, Halverson and Smith (2009) argued that introducing computers into the classroom absolutely changes the relationship between teachers and learners. It also can enhance students' level and performance, because when students learn by using computers, they develop a passion to learn and achieve their educational goals. Teachers need to be facilitators of students to enhance their knowledge and creativity in using computers as a tool for learning .

Moreover, Naba'h, Hussain, Al-Omari, and Shdeifat, (2009) stated that computers, like any other electrical gadget, can provide a means of amplifying individuals' natural talents and capabilities. Moreover, . Ross, Morrison, and Lowther (2012) concluded that the growth in technology use in education has increased focus on distance learning, the Internet, and interactive games. The results of incorporating technology into education have become more visible. Virtually all educational systems depend on technology, especially in terms of administration, regional offices, and classrooms .

Wood, Zivcakova, Gentile, Archer, De Pasquale, and Nosko, 2012) claimed that offering different kinds of technology in the classroom can motivate students to use technology more often. When teachers use different technologies, students become more involved in learning the subject and their passion for learning increases. In addition, Zaho (2012) argued that a variety of technological devices play an important role in learning language and that many people believe that new devices will emerge to meet students' language-learning needs, facilitating multimedia computing, Internet use, and speech synthesis and recognition. As a result of emerging devices, CALL was emerged in order to help students improve language skills .

CALL in Language Learning and Teaching

A number of researchers have confirmed the importance of using CALL in learning languages (e.g., Amenyedzi, Lartey, & Dzomeku, 2011; Chang, 2007; Chapelle, 2009; DelliCarpini, 2012; Haider & Chowdhury, 2012; Joshi, 2012; Knowles, 2004; Naba'h et al., 2009; and Wang & Heffernan, 2010). "CALL is a language learning and teaching approach in which the computer is used as a tool for presentation, assisting students, and evaluating material, and has an interactional element" Jafarian, Soori, and Kafipour 2012).

To begin with, Knowles (2004) stated that learning a second language demands a significant amount of effort and willingness on the part of the learner to achieve this goal. According to Chang (2007), in CALL classrooms, students are more independent in terms of learning than in traditional classrooms. Students in CALL classrooms learn by controlling the time and place. Therefore, they feel more

independent, motivated, and confident about their own learning. Moreover, much of the learning occurs when students are working by themselves (Chang, 2007).

Chapelle (2009) found that CALL can create more opportunities for learners to learn a second language effectively. Also, CALL emerged when language teachers shifted from teacher-centered to student-centered instruction (Naba'h et al., 2009), in addition, they found that students need to be more independent when learning languages. Moreover, Wang and Heffernan (2010) stated that teachers play an important role in CALL instruction because they are the one who choose the programs for students to use .

Furthermore, Amenyedzi, Lartey, and Dzomeku, (2011) stated that most teachers use computers to write lesson plans, prepare materials for teaching, and record and calculate student grades. Thus, teachers should be familiar with different programs and the uses of these programs. Also, they should be capable of adapting the programs to meet students' needs. Teachers with pedagogical proficiency in using computers can make a difference in the learning process and are more effective than other teachers in transmitting knowledge and support to students. Likewise, DelliCarpini (2012) showed that using CALL can enhance language and literacy. Learning a second language relies more on learners' autonomy, independence, and involvement than on the teacher. Nowadays, computers are widely used in second-language classes .

Haider and Chowdhury (2012) affirmed that the emergence of CALL has created noteworthy changes in the field of language teaching and learning, from the use of innovative learning materials to the spreading of interaction patterns among many learners. Joshi (2012) stated that CALL programs are designed to help students

follow instructions before starting any task. This way students use the programs correctly. In addition, CALL programs are automatically guided and can teach language in an attractive ways through animation, graphics, and problem-solving questions. Moreover, CALL classrooms give students options to choose how they want to work—individually, in pairs, or in a group. Feedback is an important strategy in the learning process; without it learners cannot learn from their mistakes. Therefore, many CALL programs provide feedback to users describing their strengths and weaknesses in terms of language skills.

Many teachers are integrating CALL to facilitate the learning process. Many educators believe that integrating CALL is not necessary in every class because students become less motivated when they do the same thing every day. According to AbuSeileek and Abu Sa'aleek, (2012) sometime CALL fails to meet students' interests and demands, and it cannot deal with all students learning difficulties; therefore, some of them become unmotivated towards the use of it. Also, they discussed that some students who are not in favor in technology become unmotivated to use it in learning. On the other hand, other educators believe that using CALL every day can motivate students to learn as long as the teacher uses different software programs that teach different language learning skills. Integrating CALL into classroom practice requires a large amount of effort from teachers to prepare good teaching materials that meet students' needs and that are appropriate for students' level and culture.

In contrast, other researchers like Lai and Kritsonis (2006) claimed that CALL has a negative impact on students. In addition, some studies showed that CALL has no effect on students' achievement. In their research paper, Lai and Kritsonis noted four negative aspects of using computer and CALL programs. The first disadvantage

was that using computers and CALL programs cost a lot of money for both low-incomes schools and parents, which can affect educational equity. Second, not all teachers and learners have the same basic computer skills; therefore, the benefit of using computers and CALL programs will be unavailable for some students. Third, CALL programs are still imperfect and most of them need to be adapted according to students' needs. Finally, CALL programs cannot deal with all students' learning problems and also don't match with their culture and beliefs.

Furthermore, Riasati, Allahyar, and Tan (2012) discussed the barriers of using technologies like CALL in education. The first barrier was that not all schools and individuals have access to computers and the Internet. Second, a lack of training for teachers and students on how to use the computer and its programs could affect its usefulness as a learning tool. Third, some teachers do not support the use of CALL as a learning tool; therefore, student reaction toward the use of this technology could be negatively influenced. Fourth, using technology inside the classroom requires a lot of time and effort for both teachers and students.

Other studies, meanwhile, have shown the opposite of the findings of this study. For example, a study conducted by Kilickaya (2007) aimed to test the effectiveness of CALL on language learning in preparation for the TOFEL exam, indicated that there was no significant difference in the structured part of the exam between the two groups that participated (the control and experimental groups) and little difference in the reading and listening parts. Likewise, Kayaoğlu, Dağ akbaş, and Öztürk (2011) conducted a study to find out whether there was a difference in learning vocabulary via animation in CALL compared to the ordinary method. The researchers found that there was no difference among students who used CALL to learn and students who

didn't. They stated that both groups learned vocabulary equally well with the two methods.

Moreover, Basoz and Cubukcu (2014), in their investigation of the effectiveness of CALL on students' vocabulary achievement, assigned students into two groups: a computer assisted vocabulary instruction (CAVI) and communicative language instruction (CLI) group. The results revealed that there was no significant difference between the two groups.

Finally, Hartmann, (2014) conducted a quantitative study in order to investigate the effects of (CALL) in a high school. Two groups of students were involved in this study: students who used CALL to improve their writing and students who did not. After collecting the data, the findings revealed that there was no statistically significant improvement in the writing achievement of students who used CALL.

Despite these negative results, many researchers are still testing the impact of CALL on students' achievement in different language skills using different CALL software.

Language Skills and CALL

A variety of computers programs help teach language skills. "CALL has been taking advantage of advanced technological facilities to create the highest interactive learning environments for activities that develop listening, speaking, reading, and writing skills" (Jafarian et al., 2012). Many learners depend on these software programs to acquire second-language skills. Sadeghi and Soltanian (2010) found that in language classes computer programs do a better job of facilitating learning than

teachers because these programs can perform multiple tasks at the same time. Joshi articulated that CALL materials are used in teaching to simplify language learning procedures. He described student-centered accelerated learning materials as those that promote self-paced learning. Thus, computers can make excellent teaching language tools .

According to Marzban (2010), CALL programs are beneficial in terms of improving language learning speed and creating individualized instruction. Listening, writing, and speaking are important skills that can be learned throughout using CALL. Speaking and writing activities are emphasized in classroom to help learners be more accurate and fluent in their target language. Also, he investigated the impact of CALL on students' achievement in his study and found that there was a significant difference between the experimental and control groups scores, in favor of experimental group.

In addition, Nobar and Ahangari (2012) stated that listening is an important feature of language because listening skills carry with them the understanding of language. Also, to be able to communicate in a second language, students need to be exposed to comprehensible input. Therefore, students need to develop listening skills to be able to communicate in a second language (Nobar & Ahangari, 2012). CALL materials offer a lot of listening practice, from easy to complex tasks, to suit students' learning styles. However, this study focused on the reading skills to proof the impact of using CALL in order to improve reading achievement.

Reading Strategies

In second-language classes, students are less likely to use reading strategies while reading. Many focus on knowing the meaning of ambiguous words by looking them up in dictionaries, instead of inferring the meanings of these words, because

they think that if they learn the meaning of the words in this way, they will understand the text. They ignore many important reading strategies such as skimming, scanning, making inferences, identifying main ideas and details, and sequencing . "Proficiency in reading involves many variables, for example, automaticity of word recognition, familiarity with text structure and topic, awareness of various reading strategies, and conscious use and control of these strategies in processing a text" (Pang, 2008, p.1).

To start with, Ringenberg (2005) and Sadeghi and Soltanian (2010) emphasized the role of reading skills in learning a second language effectively. According to Ringenberg, reading involves two important processes: word recognition and comprehension. Word recognition is "the process of perceiving how written symbols correspond to spoken language." It is an important step for reading, but not for comprehending, a text because readers construct meaning from the reading text through word recognition .

Reading is considered a language input because it plays an important role in acquiring a second language and requires complex cognitive processes. "Reading in a foreign language is a very useful and relatively painless way to improve the command over the target language" (Sadeghi & Soltanian, 2010). Reading involves many strategies that allow L2 learners to understand texts from different reading elements. These strategies include skimming and scanning, predicting general and main ideas, decoding reading details, guessing the meaning of new words, sequencing, recognizing grammar types, and criticizing. Learning how to read and use reading skills effectively is critical for students to succeed in learning a second language . "Reading is regarded as a major source of comprehensible input and as the skill that many serious learners most need to employ" (Gilakjani & Ahmadi, 2011, p. 143).

Reading and CALL

As new technologies emerge, there is a growing demand to integrate technology into language classrooms to promote academic success among students. There are many reading programs that can support learning all of the necessary comprehension skills. Studies have been shown that CALL has a significant effect on improving reading achievement (Macaruso & Rodman, 2011; Meihami & Varmaghani, 2013; and Sadeghi & Soltanian, 2010). To start with, Macaruso and Rodman (2011) asserted that computer software programs have become an important tool for teaching reading skills. Many software programs focus on teaching reading skills that serve different students' needs. Software designers have focused heavily on reading skills such as cognition, fluency, and comprehension. Also, CALL programs allow reading activities to be presented in a highly structured and systematic fashion so as to give corrective feedback and instruction for students .

In addition, Sadeghi and Soltanian (2010) stated that reading in a second language is a complex process that needs to be facilitated by using different materials and techniques such as sounds, pictures, and video. "Computer applications to teach reading hold great promise as instructional tools to increase the students' engagement in reading, promote reading comprehension, stimulate interest, and improve reading skills." Lastly, Meihami and Varmaghani (2013) conducted a study of the effect of CALL materials on L2 reading comprehension classrooms and found that "CALL materials could be effective in language learning skills and especially reading comprehension".

Merit Software

Several studies have proven the effectiveness of this software. O'Byrne, Securro, Jones, and Cadle (2006) conducted a quasi-experimental study to investigate the impact of Merit software on reading in a middle school in West Virginia. They found a significant improvement in students' scores after using the software. Jones et al. conducted a quasi-experimental study to evaluate the effects of the Merit reading program in a middle school. The results showed a significant improvement in the reading skills of students who used the program as measured by standardized tests. The software provided students with different texts about different topics and themes. Each text included multiple choice questions, filling in blanks, matching activities, and a puzzle. After finishing answering each questions, the program provide a direct feedback about each question. At the end of answering the whole text's questions, another feedback is given to define the area of weaknesses and strengths of the reading skills.

Attitude Towards CALL

Understanding the attitude of students on the use of CALL could help students cope with the problems they face when learning a second language. "The use of computers in the language classes may improve the learners' attitudes and motivation for language learning" (Nobar & Ahangari, 2012). Many studies have been conducted in this field so as to evaluate students' attitudes toward the use of CALL. Most of these studies showed that students' attitudes were positive and students found CALL beneficial in learning a second language (Afshari, Ghavifekr, Siraj, & Jing, 2013; Bulut & Abuseleek, 2007; Meihami & Varmaghani, 2013; Rahimia & Yadollahi, 2011; and Talebinezhad & Abarghoui, 2013).

Bulut and Abuseleek (2007) investigated the relationship between students' attitudes toward the use of CALL and their achievement in all language skills (e.g., reading, writing, listening, and speaking). They found that students had positive attitudes toward CALL, especially in terms of its ability to improve their listening and writing skills. Furthermore, Al Rahimia and Yadollahi (2011) investigated students' attitudes toward the use of CALL and concluded that students had positive attitudes toward the use of CALL regardless of their age and experience with using a computer. Most participants considered CALL to be a beneficial tool in learning a second language.

Moreover, Afshari, Ghavifekr, Siraj, and Jing (2013) conducted a study in Malaysia to investigate students' attitudes toward the use of CALL. They found that their students had moderate attitudes in terms of usefulness and ease of use. Likewise, Meihami and Varmaghani (2013) investigated the effect of integrating CALL into reading comprehension classrooms. They found that most students who used CALL to improve their reading skill had a positive attitude toward CALL. They recommended using CALL in teaching and learning reading to help students improve their reading skills .

Finally, Talebinezhad and Abarghoui (2013) conducted a study to investigate students' attitudes toward CALL in receptive skills (e.g., reading and listening). The results revealed that most of the participants in this study had positive attitudes toward CALL in learning receptive skills

Theoretical Framework

Two theories were used in this study to confirm the impact of using CALL and the attitude related to the use of it: Media Richness Theory (MRT) and Theory of Reasoned Action (TRA).

Media Richness Theory

MRT was developed by two researchers—Daft and Lengel—in 1984 to study the effectiveness of media for communication purposes. According to this theory, “media differ in their potential capacity for transmitting the meaning of information on four information richness dimensions” (Heeren & Lewis, 1997). MRT emphasizes using media that can facilitate a wide range of cues in order to enhance the positive effect on learning performance. One of the assumptions of this theory is that the richer the media used in a task, the more students’ performance of that task will improve. Wright, Schwager, and Donthu (2008) studied the application of media richness theory to collecting data to find the difference between using paper-and-pencil tasks and electronic (rich media) tasks. They found that using electronic tasks improved outcomes as they expected.

MRT can explain the relationship between CALL and traditional learning and students’ performance in both. According to Wright, Schwager, and Donthu, (2008) MRT suggests that “the context of the task or situation is a key determinant of the influence media richness will have toward performance measures”p.138 which includes two important task characteristics that help to determine the suitable media form to use: uncertainty and equivocality. Uncertainty refers to the amount of information or number of tasks, whereas equivocality is about the ambiguity of the information. Balaji and Chakrabarti (2010) conducted a study on the effectiveness of

MRT and found that the richness of media in online learning has a positive effect on student learning.

Theory of Reasoned Action

The theory of Reasoned Action was developed by Ajzen and Fishbein in 1975.

“The theory of reasoned action (TRA) offered a theoretical perspective that human behavior is that behavior intentional and that an individual’s stated intention to engage in a behavior is the most immediate predictor of that behavior” (Sugar, Crawley, & Fine, 2004). In addition, Park and Levine (1999) stated that in the TRA, the two variables of attitudes and subject norms, which depend on social, cultural, and individual factors, affect predicting behavioral intentions, which lead to the actual behavior. The main assumptions of this theory are that individuals act according to the circumstances that they face and intention is an important factor in determining behavior.

TRA helps explain the relationship between subject norms, attitudes, intentions, and behavior. Peslak, Ceccucci, and Sendall (2010) stated that TRA uses four important factors: attitude, subjective norm, intention, and behavior. Furthermore, Orr, Thrush, and Plaut (2013) explained the relationship between these factors as “behaviors are driven directly by intentions towards a behavior. Intentions are driven directly by attitudes and perceived norms related to the behavior. Attitudes and perceived norms are formed from beliefs.” The aim of this study was to examine students’ behaviors with respect to CALL in order to develop appropriate interventions in the future. Therefore, it is important to know students’ perspectives in using CALL.

Summary of the Literature Review

This chapter reviewed the literature covering technology in education, technology in classrooms, and language and technology. It also covered technology and CALL and second languages and CALL. Finally, it reviewed the research on attitudes toward CALL. The literature showed that, according to some researchers, technology is an effective tool for learning as it can enhance the quality of teaching and learning (Amiel & Reeves, 2008; Christensen, 2002; Gündüz, 2005; Halverson & Smith, 2009; Jhurree, 2005; Muir-Herzig, 2004; Naba`h et al., 2009; Ross et al., 2010; Wood et al., 2012; Zaho, 2003). Furthermore, other studies asserted the importance role of CALL in the classroom and proved its effectiveness (Amenyedzi et al., 2011; Chang, 2007; Chapelle, 2009; DelliCarpini, 2012; Haider & Chowdhury, 2012; Joshi, 2012; Knowles, 2004; Naba`h et al., 2009; Wang & Heffernan, 2010). According to these researchers, CALL can help students to become more independent in their learning, provide them with a good learning environment, and provide them with rich learning materials and direct feedback.

In addition, researchers such as Marzban (2010) and Sadeghi and Soltanian (2010) claimed that CALL is an important tool that can help students to be more accurate and fluent in a second language and to succeed in language classes. Computer programs facilitate learning better than teachers because these programs can perform multiple tasks at the same time. "Computers can facilitate a variety of learning tasks, and have enormous potency as teaching tools. They can help both the students and the teachers because of their special properties" (AbuSeileek & Abu Sa'aleek, 2012, p. 25). According to Naba`h et al. (2009), CALL gives attention to all individuals at the same time, guides them, and provides them with the explanations

they need to improve immediately. It also allows them to choose the appropriate materials to their level.

There are several barriers to integrating technology in education, according to Lai and Kritsonis (2006) and Riasati et al. (2012). Technology costs money, it may be perceived as a waste of time, some schools lack the resources to train teachers and learners on the use of CALL, and many schools have out-of-date software that cannot meet students' needs. Moreover, several studies showed no difference between students who used CALL and those who learned through ordinary methods (Basoz & Cubukcu, 2014; Hartmann, 2014; Kilickaya, 2007; Kayaoğlu et al., 2011). Still, many studies showed that students overall had a positive attitude toward the use of CALL (Afshari et al., 2013; Bulut & Abuseleek, 2007; Meihami & Varmaghani, 2013; Rahimi & Yadollahi, 2011; Talebinezhad & Abarghoui, 2013).

This study is similar to other studies (Almekhlafi, 2006; Bhatti, 2013; Marzban, 2010) in terms of investigating the impact of CALL on students' reading achievement. However, some of the differences between the current study and others (Bhatti, 2013; Marzban, 2010) are the context and the participants. The current study was similar to the study by Almekhlafi (2006), as both were conducted in the UAE in Al Ain; however the participants were of different genders.

Chapter 3: Methodology

Introduction

This chapter introduces the research methodology that was used in this study. It also describes the methods were used to answer the research questions. Each section in this chapter includes a detailed description of the research questions, hypothesis, participants, instrumentation, research design, procedures, and data analyses. This experimental study aimed at determining the impact of CALL on student achievement in reading and to know their perspectives on the use of CALL.

Sampling

The participants in this study were 50 female students in Grade 7 (in two classes) in a middle school in Al Ain. Their ages were between 11-12 years old and their levels in English language were between (60% -90%) . The selection of participants was nonrandomized. Participants were divided into two groups: control and experimental. In each group there were 25 students. The experimental study was conducted at the computer laboratory, which was located at the school after getting an approval from the school principal.

Instruments (Validity and Reliability)

For the purposes of this study, Two instruments were used: (a) (EMSA), and (b) attitude questionnaire. First, The EMSA exam was used as a pretest and posttest to measure the difference in reading achievement. It is one of the ADEC standardized tests which is designed to measure students' reading achievement. For this study, the researcher chose six passages from four EMSA exams that emphasized different reading skills such as skimming, scanning, predicting, sequencing, analyzing, critical

thinking, and inference. The exam included six reading comprehension passages. For each passage there were (4 to 6) multiple-choice questions.

In addition, EMSA has been validated as a standardized test. Also, the test content was validated by two English Coordinators and two English Supervisors from ADEC. These reviewers were asked to validate the content and types of questions on the test. The test reliability was attained through the pilot study and the Cronbach Alpha reliability coefficient was calculated as 0.77 ($0.77 > 0.7$) which showed that the test used was reliable. Second, a questionnaire was created to elicit information about students' attitudes toward the use of CALL during this study. It was designed to be used with the experimental group to determine their attitudes toward CALL.

Furthermore, the questionnaire was composed of five Likert-scale items (1 = strongly agree, 2 = agree, 3 = indifferent, 4 = disagree, 5 = strongly disagree). The questionnaire included 44 statements and consisted of two sets of questions. The first section was the background, which included two questions on the number of students who used computers and CALL at home. The second section included 40 statements on the use of CALL the distribution of the items on the questionnaire was random. The sections of the questionnaire were ease of use, interface, interaction, learning, and retention.

The questionnaire was modified several times according to the opinions of several university instructors and school supervisors. Their feedback was taken into consideration. This process provided content validity. A pilot study was also conducted to test the reliability of the questionnaire; therefore, the Cronbach Alpha reliability coefficient was used and calculated as 0.77 which showed that the questionnaire used was reliable.

Research Design

This study used a quasi-experimental design. Pre and posttests were used. The independent variable in this study was the impact of CALL and the two dependent variables were students' reading achievement and their attitudes toward the use of CALL. Participants weren't assigned randomly within each group and class because of technical issues. Two classes were involved in this study (Class A and Class B). Class A was the experimental group and Class B was the control group.

Data Collection Procedures

Both groups received the same EMSA exam as a pretest. For one full month, the experimental group practiced reading skills using CALL (Merit software) at the computer lab. The control group practiced reading comprehension using the regular method. After 1 month, the same EMSA exam was administered to the two groups to identify the difference in the achievement. Finally, the experimental group received a questionnaire about their perspectives on CALL. Before students began answering the questionnaire, they received some verbal instruction about how to complete it. A 5-point Likert scale was used to help students differentiate negative and positive attitudes. Some words in the questionnaire were simplified to ensure the questionnaire was suitable for most of the students. The researcher translated some statements for low achievers.

Table 1 below shows the difference in teaching the control and experimental groups through this study:

Table 1: Experimental group and control group treatment

	<u>Experimental group</u>	<u>Control group</u>
Objective	Enhance students' reading achievement	Enhance students' reading achievement
Content	Merit software content (Reading passages)	Merit software content (Reading passages)
Delivery Method	CALL (Merit)software programs (Students use Merit software reading comprehension texts and answer the interactive questions)	Traditional method (Students read the comprehension texts through papers and answer their questions using pencils)
Place	In the Computer lab	In the normal classroom
Enrichment activities	Based on the interactive software (Merit software)	Based on the passages that teacher gives (enrichment activities related to the theme)
Assignments	Completing interactive tasks in reading using Merit software	Answering reading comprehension handouts
Time of treatment	One moth, 45 minutes a day	One moth, 45 minutes a day
Instructor	Same English teacher	Same English teacher
Pretest –posttest	Same	Same
Instrumentations	Pre-test, post-test, and Questionnaire	Pre-test and post-test

Data Analysis

After collecting data from the pretest, posttest, and questionnaire, three types of statistics were used to analyze data: (a) analysis of variance (b) descriptive statistics and (c) an independent sample t-test. To analyze the posttest data, the researcher used analysis of variance (ANOVA) to determine if there was any significant difference between the achievements of both groups. Also, to analyze the questionnaires, the researcher used both an independent-samples *t* test to find the differences among the experimental group and descriptive statistics to analyze students' attitudes toward the use of CALL.

Summary

This chapter describes the methodology of study, including the research questions, participants, and setting, data collection tools, design, procedures, and data analyses. It describes the method by which the researcher investigated the effects of CALL on students' reading achievement and students' attitudes toward the use of CALL. Three methods were used: pretest, posttest, and a questionnaire. The participants ($N = 50$) were from one school.

Chapter 4: Results

Introduction

The aim of this study was to examine and measure the effect of using CALL on students' achievement in reading. It also aimed to provide information about students' perspectives on the use of CALL in language learning by investigating their attitudes toward the use of CALL. This chapter presents the procedures used to attain the results with the following instruments: the EMSA test and a questionnaire. The results of this study are presented based on the research questions .

Findings of the Study.

Question 1

In order to answer Question 1 "to what extent can CALL affect students' achievement in reading?", the question tended to measure students' achievement in their pre and post-tests in reading. Students took the posttest after one month of either regular instruction or CALL. Analysis of variance (ANOVA) was performed to test the significant difference between the control and the experimental groups. The results obtained from the analysis of variance indicated that there was a significant difference in the achievement scores ($p = .000 < 0.05$). Therefore, the hypothesis "there is no significant difference between using ordinary methods in teaching and using CALL in terms of students' achievement in reading" was rejected. The summary of the analysis is shown on table 2.

Table 2: Analysis of variance (ANOVA) of students' achievement in reading

<u>Source</u>	<u>Type III Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig.</u>
<i>Corrected Model</i>	11136.925 ^a	2	5568.462	94.719	.000
<i>Intercept</i>	615.158	1	615.158	10.464	.002
<i>Group</i>	1304.439	1	1304.439	22.188	.000
<i>Pretest</i>	8203.145	1	8203.145	139.535	.000
<i>Error</i>	2763.095	47	58.789		
<i>Total</i>	123693.000	50			
<i>Corrected Total</i>	13900.020	49			

* *R Squared* = .80 (*Adjusted R Squared* = .79)

Question 2

In order to answer Question 2 " How do students (in the experimental group) perceive using CALL? ", the researcher summarized students' overall attitudes of all sections (ease of use, interface, interaction, learning, and retention) in the questionnaire.

In the first section of the questionnaire "ease of use", there were 4 items focused on how students felt about using CALL. Table 5 indicates the means and standard deviations of each item. The results showed that the majority of students found CALL an easy, clear, and comfortable tool for learning. Furthermore, many of them found the level of the language in CALL was appropriate to their language level. In addition, a lot of students agreed that the time spent using CALL was enough to them. The means in this section were ranged between (3.7-4.4), and the standard

deviations were ranged between (.6-1.1). Table 3 shows the means and standard deviations results for each item within the section "ease of use".

Table 3: Ease of use means and standard deviations results

<i>Item</i>	<i>M</i>	<i>SD</i>
CALL Merit software is easy to use.	4.4	0.7
The level of the language in CALL (Merit software) is clear and simple.	4.4	0.6
The time spent using CALL is enough.	3.7	1.1
I feel comfortable using CALL.	4.2	0.7
Total	4.2	0.4

The second section was the interface. There were 6 items focused on how students experienced CALL interface. Table 6 shows the means and standard deviations of each item. The attitude of students in this part tended to be more positive about the CALL interface in terms of understanding, feedback, consistency, and the variety of attractive and colorful materials. The means ranged between (3.8 -4.5), and the standard deviations were ranged between (.4-1.1). Table 6 shows the means and standard deviations results for each item within. Table 5 shows the statistical results of the questionnaire in the interface section.

Table 4: Interface means and standard deviations results

<i>Item</i>	<i>M</i>	<i>SD</i>
The CALL (Merit software) interface is ...		
easy to understand.	4.5	0.7
attractive.	4.1	0.8
colorful.	4.3	0.7
consistent throughout the whole program.	3.8	0.9
providing me with correct feedback.	4.0	1.1
The feedback provided by CALL enhances my learning.	4.3	0.6
Total	4.2	0.4

The third section was the interaction. There were 4 items focused on how CALL helped students to interact with the software, teacher, and other students. Table 7 indicates the means and standard deviations of each item. This section indicated that most of the learners found the interaction with teachers, classmates, content, and the interface was easy. The means ranged between (4.1-4.5), and the standard deviations were ranged between (.5-.8). Table 5 shows the means and standard deviations results for each item within the interaction section

Table 5: Interaction means and standard deviations results

<i>Item</i>	<i>M</i>	<i>SD</i>
CALL increases my interaction with....		
my teacher.	4.5	0.8
my classmates.	4.2	0.8
the software content.	4.4	0.6
the software interface.	4.1	0.8
Total	4.3	0.5

The fourth section was learning. There were 21 items focused on how the learning processes throughout using CALL as a learning tool. Table 8 indicates the means and standard deviations of each item. Most students found that CALL was an effective tool for learning and improving their reading skills, such as identifying main ideas and details, learning vocabulary, skimming and scanning, sequencing, identifying text structure, increasing reading speed, and drawing conclusions. Furthermore, most of them considered CALL as a good learning tool that can motivate them to learn in a stress-free environment. Moreover, many of them think that CALL helped them to be more independent about their own learning. Also, a lot of them agreed that CALL helped them improve their computer skills. The means in this section ranged from (3.8- 4.5), and the standard deviations were ranged between (.6-1.2). Table 6 shows the means and standard deviations results for each item within the learning section.

Table 6: Learning means and standard deviation

<i>Item</i>	<i>M</i>	<i>SD</i>
CALL		
is a stress-free environment for learning English.	4.5	0.6
increases my motivation to learn English.	4.4	1.0
has reading activities that are more interesting and attractive than reading a book.	4.0	1.2
is good for practicing English skills.	4.3	1.0
helps me understand the reading content better.	4.3	0.8
helps me improve my skimming and scanning skills.	4.0	0.6
helps me predict the general ideas of the reading texts.	4.2	0.8
helps me figure out the main ideas of the reading text.	4.1	0.9
helps me decode the details of the reading texts.	4.2	0.6
helps me guess the meaning of new vocabulary words.	4.4	0.8
helps me memorize vocabulary words.	4.0	0.9
helps me recognize the sequence of events in the text.	4.0	0.9
helps me answer critical thinking questions related to the reading texts.	4.4	0.7
helps me recognize grammar types used in the text.	4.1	0.8
helps me recognize text structure and type.	3.8	1.0
helps me distinguish between factual texts and fictional texts.	4.0	1.0
helps me increase my reading speed.	4.4	0.8
helps me draw conclusions.	4.1	1.0
helps me become an independent reader.	4.2	0.8

helps me improve my computer skills.	4.1	0.9
Total	4.2	0.5

Finally, the last section was retention. There were 6 items focused on students' intention in continuing using CALL after the study. Table 9 indicates the means and standard deviations of each item. This section indicated that most of the students intended to use CALL in the future either at home or school as part of their learning process. In addition, many students showed that they were advised by their teacher and classmates to use CALL after this study. The means for items within this section were ranged from (3.8- 4.3), and the standard deviations were ranged between (.7- 1.4). Table 7 shows the means and standard deviations results for each item within the retention section.

Table 7: Retention means and standard deviation

<i>Item</i>	<i>M</i>	<i>SD</i>
My teacher advised me to continue using CALL	4.3	0.7
My classmates advised me to use CALL after the introductory classroom experiment.	3.9	1.0
I intend to continue using CALL in my other English classes.	3.8	1.2
I intend to use CALL at home.	3.8	1.4
I like having CALL as part of my learning experience.	4.3	0.9
I advise my classmates to continue using CALL.	4.2	1.0
Total	4.1	0.6

Based on the statistical results most students have positive attitudes toward the use of CALL. In addition, the hypothesis " Students' attitudes toward CALL tend to be negative should be rejected.

Question 3

To answer Question 3 " is there a significant difference between students' results due to the amount of time they use CALL at home?", the researcher used an independent-samples *t*-test, which showed that there was no significant difference between the students (see Table 10). The significance was .138 ($p > 0.05$). The means for students who used CALL at home less than 45 minutes ($M = 12.33$) and more than 45 minutes ($M = 14.0$) were close, and the standard deviations were (SD= 8.052 and 6.49), respectively. Therefore, the null hypothesis "there is no significant difference between students' results due to the amount of time they use CALL at home" should not be rejected. Table 8 shows the difference between students' results according to the amount of time CALL was used at home.

Table 8: t-Test students' results by time CALL was used at home

	<u>Group 1</u>	<u>Group 2</u>	<u>t</u>
	<i>Less than 45 minutes</i>	<i>More than 45 minutes</i>	
<i>M</i>	12.33	14.0	1.1
<i>SD</i>	8.0	6.49	
			<i>Sig.</i> .14

Question 4

To answer Question 4 "is there a significant difference between students' results due to their expertise in using computers?", the researcher analyzed the results of the *t* test, which indicated that there was no significant difference between students according to their expertise with using computers. The significance was .054 ($p > 0.05$). The means were close ($M = 14.1$ and $M = 11.8$), as were the standard deviations ($SD = 8.7$ and $SD = 5.7$). Therefore, the null hypothesis "there is no significant difference between students' results due to their expertise in using computers" should not be rejected. Table 9 shows that there is no difference between students' results due to their expertise with using computers.

Table 9: t-Test students' students' results by expertise with using computers

	<u>Group 1</u>	<u>Group 2</u>	<u>t</u>
	<i>Less than 5 years</i>	<i>More than 5 years</i>	
<i>M</i>	14.1	11.8	.76
<i>SD</i>	8.7	5.7	
			<i>Sig.</i> .054

Summary of the Major Findings

Both groups (experimental and control) received the same EMSA exam as a pretest. For 1 month, the experimental group practiced reading comprehension using CALL (Merit software) in a school computer lab. Meanwhile, the control group practiced reading comprehension using the traditional method (reading worksheets). After 1 month, the same EMSA exam was administered to the two groups to identify

the difference in achievement. A questionnaire was created for the experimental group that used CALL during the study. This questionnaire addressed two general background questions and 40 items using a Likert scale to evaluate students' perspectives on and attitudes toward the use of CALL .

The results from the posttest indicated that there was a significant difference in reading achievement among the students who used CALL and those who did not. In addition, the results from the questionnaire indicated that most students have positive attitudes toward the use of CALL. The results of the general background questions indicated no significant difference between students' achievement on the pretest and posttest due to the use of CALL at home. However, there was a significant difference between students' results based on students' expertise in using computers. Chapter 5 presents a discussion of the findings and provides recommendations for future research.

Chapter 5: Discussion

Introduction

The purpose of this study was to determine the effect of CALL on students' achievement in reading comprehension, and students' attitude toward it. The findings reported according to the research questions and hypotheses. The first section of the discussion demonstrates the effect of the CALL program on students' reading comprehension achievement. The second section demonstrates students' attitude towards the use of CALL.

Discussion of the Findings

Question 1

The first question in this study was, "To what extent can CALL affect students' achievement in reading?" The researcher answered this question to discover whether or not the use of CALL can improve students' reading skills. The results of this study showed that there was a significant difference between the two groups. The experimental group scored higher than the control group on the posttest, which indicates that computer-assisted language learning helped students in improving their reading skills. The first hypothesis stated that there would be no significant difference between the experimental group and the control group. However, students who practiced reading comprehension using CALL scored higher than students who studied using the traditional method. The first hypothesis was rejected because there was a significant difference between the two groups.

There are at least three reasons why students who used CALL may performed better than who did not. First, students practiced using materials in CALL that were enriched with sounds, pictures, colorful passages, and different types of questions and

puzzles. Second, students were given direct feedback through using CALL, which encouraged them to focus on their weaknesses. Finally, CALL provided students with a learning environment where they were more independent throughout the learning process.

The results of this study were similar to those of other studies conducted to determine the effects of CALL on students' reading. For example, in a study conducted by Meckhlafi (2006) in the UAE to investigate the effects of CALL, the researcher found that there was a significant difference between CALL users and nonusers. Further, Marzban (2010) investigated the effects of CALL on student achievement and found that the experimental group using CALL scored significantly higher than the control group that did not. He also noted that reading skills are neglected in ordinary classroom instruction, which is why students have difficulties with these skills. Therefore, he recommended using CALL to help students improve their reading skills because it allows them to depend on themselves and control their own methods of learning .

More recently, Bhatti (2013) conducted a study to examine two methods of teaching (an instructor-led class and CALL) and also used pre- and posttests to measure students' reading skills. The results of his study showed that CALL was more effective than an instructor-led class. Bhatti explained that students who used CALL scored higher than who did not because CALL provided students with a more advantageous learning environment, one in which they could be more independent and enjoy a wider variety of reading materials.

The researcher also tested the applicability of MRT, which states that the richer the media used in a task, the more students' performance in that task will

improve. The results of this study confirmed with this theory. The results of the posttest proved that more interactive activities in CALL helped students perform better than those who did not use it. Since the rich reading materials helped students who used CALL to perform better than who did not use it, he concluded from his study that rich materials can improve students' achievement.

Question 2

Using the Likert scale to determine the students' attitudes showed that the majority of students found CALL as an easy, clear, and comfortable tool for learning, and the interaction with teacher, classmates, content and interface were easy because they were directed and guided most of the time. In addition, the attitude of the students in the part "interface" tended to be more positive in terms of understanding, feedback, consistency, and the variety of attractive and colorful materials. Most of the time, students were given feedback according to the skills that needed improvement. Also, most students found CALL to be a good learning tool for improving their reading skills because there are a variety of attractive materials available. Furthermore, most students found out that CALL is a good tool to learn and improve the reading skills such as reading for the main ideas and details, learning vocabulary, skimming and scanning, sequencing, text structure, reading speed, and drawing conclusions. They considered CALL a more effective tool than printed books because it included pictures, sound, and different activities that it was easy for them to navigate and complete. Finally, in the last section "retention" the results indicated that most of the students tend to use CALL in future either at home or school as a part of their learning process. This indicated that students had a good experience using CALL to learn which motivated them to continue using it in future.

Question 3

Furthermore, the results indicated that there was no significant difference between students who practiced reading using CALL at home and who just used it only at school, this result also confirm with the MRT. This result may indicated that students gained and acquired some reading skills throughout practicing different reading skills using CALL at school which didn't make any difference between students. Also, spending time using enrich material in CALL can impact positively on students' achievement as it confirmed with the theory MRT.

Question 4

. The results based on students' expertise in using computer indicated no significant difference between students' results due to their expertise using computers. The reasons for this could be that students are constantly being directed and assisted by the program. Furthermore, the program provided them with a tour in how to navigate and answer the questions. Also, there was a differentiation in the program's content where all students were able to practice using the suitable passages and exercises for their level. Therefore, students with less expertise using computers did not encounter any difficulty using CALL.

The results of the questionnaire were in alignment with the results of some studies, Talebinezhad and Abarghoui (2013) conducted a study to investigate students' attitudes toward CALL in receptive skills. Their results revealed that most of the participants in that study had positive attitudes toward CALL in learning receptive skills. Moreover, Meihami and Varmaghani (2013) investigated the impact of integrating CALL into reading comprehension classrooms. The results showed that most students who used CALL to improve their reading skills had a positive attitude toward CALL. The researchers recommended using CALL in teaching and learning

reading skills. Furthermore, Ghaemi and Hosseini (2014) conducted a study on student attitudes toward the use of CALL and found that students had a positive attitude toward CALL after using it through the study, and that they were willing to use it more in future.

The purpose of using RAT in this study was to explore the impact of CALL on students' attitudes. Results were confirmed with RAT. As noted in chapter two, individuals act according to the circumstances that they face and, for this reason, intention is an important factor in determining behavior. In this study, the experimental group was placed in a CALL classroom and they enjoyed learning through it. Students generally had a positive attitude toward using CALL to improve their reading skills and the experimental group showed that they valued CALL as a learning tool.

In conclusion, with the rapid growth of technology in the field of education, and “the pervasive influence of technology on education, the relationship between language ability and computer use has gained more attention during the last decade” (Talebi & Teimoury, 2013). Many researchers have argued that students can benefit from the use of technology such as CALL in language classes. The researcher concluded that CALL could play an important role in teaching languages. The findings indicated that students had positive perspectives on the use of CALL to improve their achievement in reading comprehension. The findings also showed that there was a significant difference between the experimental group and the control group on the posttest. These findings on the effectiveness of CALL can be attributed to several factors. First, the students found the CALL program easy to use. Second, they were motivated by the self-directed learning offered through the CALL program.

The results of this study provide evidence that supports other researchers' claims about the positive effect of CALL on students' achievement .

The improvement in reading achievement shown by the experimental group can be attributed to the use of CALL. The students in the experimental group improved their reading achievement over one month using CALL as a tool for learning. As a result, it was concluded that the students from the experimental group were more engaged and motivated to learn when given the chance to use CALL instead of paper and books.

Implications for Practice

Because teachers need to vary their teaching methods based on students' needs and interests, they should be aware of the importance of CALL to improving students' reading skills. Ordinary ways of teaching reading are less effective than CALL. Given the proven effectiveness of technologies such as CALL, teachers need to use technology more often in their classrooms in ways that benefit students. Because the ADEC does not have a specific curriculum or textbook for teaching the English language, teachers in the UAE have a lot of flexibility in integrating CALL into their classrooms and making it an important part of the learning process. Overall, integrating technology into language classrooms can help students to develop positive attitudes toward learning English.

Recommendations for Future Research

Based on the findings discussed in this chapter, the following suggestions are proposed for further studies. First, the participants in this study were all female students from Cycle 2. Therefore, this study should be repeated with male students and with students from Cycles 1 and 3. Second, this study focused only on one skill: reading. Further studies should be conducted to determine the effects of CALL on

other language skills (e.g., speaking, writing, listening, and grammar). Finally, this study was conducted in a public school. Future studies should be conducted in the context of private schools.

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Appendix A: EMSA Exam (Pretest- Posttest Exam)

EMSA Exam

Pretest - Posttest

Grade 7

Name:

Class:

Test instructions:

Read the texts and then answer the questions

Dubai Ice Rink



Teachers: bring your students to Dubai Ice Rink!

With a special school package, you and your students can enjoy the coolest place in town. Our Olympic-sized ice rink is a great place to learn to skate, play ice hockey, or just have fun. Skating is also a great way for your students to exercise.

Location:

Ground level of The Dubai Mall

Price:

2 hour skating session for AED 25 per student

Special offers:

Add a 30-minute free tour to see how ice rink works. This behind-the-scenes tour is only available from 9.30-10.00 a.m. on Tuesday and Thursday.

Food: Dubai Ice Rink also offers special lunch boxes for only AED 25 per student.

Contact Us:

P.O. Box 112233, Dubai, UAE

Tel: +9714 777 7777

Email- dubaiicerink@info.edu

Join us for this exciting experience!

Text 1 Questions

For whom is the advertisement most likely written?

- a. Teachers
- b. Students
- c. Hockey players
- d. Skating coaches

What does the picture show about Dubai Ice Rink?

- a. How much money it costs to skate
- b. How many floors may be inside
- c. How to play ice hockey
- d. How the ice rink works

According to the text, what does Dubai Ice Rink offer?

- a. Birthday parties
- b. Special lunch boxes
- c. Exercise programs
- d. Ice hockey tournaments

What additional information would be **most** helpful to include in the advertisement?

- a. What shops are in the mall
- b. What is the size of the rink
- c. What are the opening hours
- d. What skating equipment is needed

Lights of the buildings

It took over five hours for my bus to reach the edge of the city. I was so excited to see my uncle in the city of Dubai. My parents said that I could leave our home in the Al Hajar Mountains to visit with my father's brother, Ali, who lives in Dubai. Uncle Ali had promised me that I would love the lights of the city as much as I love the light of the stars that I can see from my home.

As I stepped off the bus, I was amazed at the noise and the number of people walking around. Looking up at the tall buildings, I almost did not see Uncle Ali. There he was, looking at me with a huge smile on his face. He gave me a warm hug and said, 'You resemble your father.' As we got near his home, I began to wonder about this city of Dubai. Uncle Ali told me that the next day we would go to the Dubai Museum to learn some lessons from the past. I was so excited that I could hardly sleep.

The next morning, we were up early for our trip to the museum. On the way, I saw many tall buildings, shopping centres, hotels, office towers, and schools. I asked 'Uncle Ali, when will I see the lights?' He chuckled, 'Soon my nephew, soon.' The museum was filled with a great collection of old maps, artefacts, and very old musical instruments. As we walked through the museum, I began to feel as if I were going back to the past. The old maps jumped at me and begged me to learn more about my heritage. I did not even notice how long we had been there until my uncle said it was time to go home.

On our way back to Uncle Ali's house, I finally got to see the lights. It seemed that the entire city was sparkling like the stars. I could never have imagined such a beautiful sight. Buildings were filled with lights, and everywhere I looked, city starts were shining at me.

I stayed with Uncle Ali for three more days, and then had to return home. I will never forget my stay in the city that sparkles like the stars.

Text 2 Questions

1. Where did the writer begin his bus trip?
- The Dubai Museum
 - The home of Uncle Ali
 - The Al Hajar Mountains
 - The Dubai bus terminal
2. What does the word resemble mean in this sentence from the text?
"You resemble your father."
- Talk to
 - Relate to
 - Look like
 - Remind of
3. Why does the writer say the old maps at the museum 'jumped' at him?
- The maps seemed to move
 - The maps interested the writer
 - The maps were big and colorful
 - The maps were hard for the writer to see
4. What type of text is this?
- Myth
 - Fable
 - Poem
 - Recount
5. What is the purpose of this sentence from the text
"It seemed that the entire city was sparkling like the stars."
- To show how the city and country are the same
 - To describe how the city looks at night
 - To show that the narrator misses his home
 - To explain that the stars appeared in the sky
6. In the text, why are some words within inverted commas (' ')?
- To express feelings
 - To inform the reader
 - To emphasize meaning
 - To show people are talking

Text 2 Questions

1. Where did the writer begin his bus trip?
 - a. The Dubai Museum
 - b. The home of Uncle Ali
 - c. The Al Hajar Mountains
 - d. The Dubai bus terminal

2. What does the word resemble mean in this sentence from the text?
"You resemble your father."
 - a. Talk to
 - b. Relate to
 - c. Look like
 - d. Remind of

3. Why does the writer say the old maps at the museum 'jumped' at him?
 - a. The maps seemed to move
 - b. The maps interested the writer
 - c. The maps were big and colorful
 - d. The maps were hard for the writer to see

4. What type of text is this?
 - a. Myth
 - b. Fable
 - c. Poem
 - d. Recount

5. What is the purpose of this sentence from the text
"It seemed that the entire city was sparkling like the stars."
 - a. To show how the city and country are the same
 - b. To describe how the city looks at night
 - c. To show that the narrator misses his home
 - d. To explain that the stars appeared in the sky

6. In the text, why are some words within inverted commas (' ')?
 - a. To express feelings
 - b. To inform the reader
 - c. To emphasize meaning
 - d. To show people are talking

Text 3

Abu Dhabi Heritage Village

One of the most interesting sites in Abu Dhabi is the fabulous Heritage Village. An authentic model of a Bedouin encampment before the discovery of oil, the village offers visitors the chance to view life as it was lived in the past. Reconstruction of traditional souqs, mud-brick houses, and houses made from palms provide a window to the past.

Heritage Village also offers the opportunity to experience activities such as camel riding and horse riding, along with an entertaining and popular demonstration of the sport of falconry.

The re-creation of the life of a costal fisherman, trader, and pearl diver is the village's most impressive exhibit. A museum showcasing earlier weapons, coins, and diving equipment adds to the experience of peeking at a not-so-distant past.

If you're a visitor from a foreign country, try to stop by the Heritage Village. You're likely to have a wonderful time. Don't forget to complete your visit with an excellent meal from one of the many local restaurants.

Text 3 Questions

1. According to the text, which was the most impressive exhibit?
 - a. The oil exhibit
 - b. The falconry exhibit
 - c. The fisherman exhibit
 - d. The museum exhibit

2. According to the text, what does the Heritage Village offer to visitors?
 - a. A view to the past
 - b. A charming adventure
 - c. A chance to play sports
 - d. A window to the future

3. Which of the following is **not** a part of the museum showcase?
 - a. Coins
 - b. Weapons
 - c. Diving equipment
 - d. Oil extraction tools

4. For whom is the text most likely written?
 - a. A foreign visitor
 - b. A previous visitor
 - c. The village builders
 - d. The village employees

Text 4

The Ant and the Grasshopper

In a field one summer's day a grasshopper was hopping about, chirping and singing to its heart's content. An ant passed by, struggling along with an ear of corn he was taking to the nest.

"Why not come and chat with me," said the grasshopper, "instead of toiling and struggling in that way."

"I can't stop. I am working to store food for the winter," said the ant, "I suggest you do the same."

"Why bother about winter?" asked the grasshopper. "We have got plenty of food at present."

But the ant went on its way and continued working.

When the winter came the grasshopper found itself sick with hunger, while it watched the ants every day handing out to one another corn and grain from the stores they had collected in the summer.



Text 4 Questions

1. What word in the opening paragraph gives the idea of hard work?
 - a. Hopping
 - b. Chirping
 - c. Singing
 - d. Struggling

2. What word best describes the ant in the first paragraph?
 - a. Concerned
 - b. Hard-working
 - c. Carefree
 - d. Troubled

3. The ant tried to help the grasshopper by
 - a. Helping him collect food
 - b. Giving him advise
 - c. Sharing his food
 - d. Sitting down to chat with him

4. The message of this story is that if you
 - a. Make the most of opportunities now you will be rewarded in the future
 - b. Can put off unpleasant tasks until tomorrow you will end up being happier.
 - c. Think about something for long enough the answer will appear
 - d. Concentrate on having fun and enjoying life things will fall into place.

5. This text could best be described as
 - a. a chapter from a novel
 - b. a fable
 - c. a humorous short story
 - d. a poem

Text 5

American Alligators

Description

American alligators can grow to nearly twenty feet long. They have a very thick skin and enormous, sharp teeth.

Habitat

They can be found in Florida, Texas, and other southeastern states of America.

Feeding habits

They feed on fish, small mammals, and birds. They have occasionally been known to attack humans

Young

Females lay between thirty and fifty eggs inside a mound of soil and plant matter. After about nine weeks the eggs hatch. The hatchlings are about nine inches long. It is said that the mother will sometimes take an egg in her mouth and roll it until it cracks open and the youngster climbs out.

Life span

American alligators may live to about 50 years in the wild.

Protected status

In the past, alligators were hunted for their skins. They are now a protected species and their populations are increasing.

Text 5 Questions

- The main ideas in this text are communicated by using
 - brackets
 - quotations from experts
 - many descriptive adjectives
 - short sentences and bolded subheading
- the picture of the alligator helps show that
 - they feed on fish
 - the females lay between thirty and fifty eggs
 - they can grow to nearly twenty feet
 - their teeth are sharp
- American Alligators are usually found in all of the following **except**
 - The southeastern states
 - Florida
 - Texas
 - New York
- American Alligators are rarely feed on
 - Birds
 - Humans
 - Small mammals
 - Fish
- The text can best be described as
 - Factual
 - Opinion
 - Fictional
 - Poetic
- Which piece of information is **not** presented as a fact about American Alligators?
 - They are now a protected species
 - They can be found in Florida and Texas
 - Females lay between thirty and fifty eggs
 - The mother will sometimes take an egg in her mouth and roll it

Text 6

The Ant and the Dove

As an ant was crawling home to his nest one day, he went past a sparkling fountain. "What a beautiful sight," he thought. He went nearer to have a better look. Suddenly he slipped. He slithered over the edge and fell into the water.

Just at the moment a dove was flying over the fountain. She saw the tiny ant drowning. She quickly flew to a tree nearby and picked a leaf from it with her beak. "Here you are," she called. She dropped the leaf close to the struggling ant. Gasping for breath, she climbed onto the leaf. Then he floated safely to dry land.

Next day the ant saw the dove looking for worms. A man was creeping up behind her. He wanted to catch the bird and take her home. "Got you," he cried as he trapped the gentle dove in his net. The ant ran over to the man. He crawled up his leg and bit him hard.

"Ouch!" yelled the man, jumping up and down. He dropped the net and clutched his leg.

The dove hopped out of the net and flew away to safety. "Thank you," she cooed to the ant.



Text 6 Questions

1. Why did the dove help the ant?
 - a. Because she felt it was her fault
 - b. It was her job to help others
 - c. To repay a favour
 - d. To be kind

2. How did the dove save the ant?
 - a. She used a net
 - b. She placed him on dry land
 - c. She dropped a leaf near the ant
 - d. She used a stick from a nearby tree

3. What is the moral to this story?
 - a. Look before you help
 - b. Hard work brings success
 - c. Try, try, and try again
 - d. One good turn deserves another

4. The word cooed in this text suggests that
 - a. The bird flew silently away
 - b. The bird expressed thanks with her usual sounds
 - c. The ant could not understand the bird
 - d. The ant thought the bird was laughing at him

5. What made the ant fall into the water?
 - a. He was trying to have a drink
 - b. He wanted a closer view of the fountain
 - c. He wanted to see his reflection
 - d. He was distracted by the dove

Appendix B: Questionnaire

Students' Attitude Towards the Use of Computer Assisted Language Learning (CALL) to promote reading skills

1. Number of hours using CALL per day at home:

- Less than 45 minutes More 45 minutes

3. Expertise in using a computer:

- Less than 5 years More than 5 years

(5= Strongly Agree) / (1= Strongly Disagree)

No	Statement	5	4	3	2	1
1	CALL (Merit software) is easy to use.	5	4	3	2	1
2	The level of the language in CALL (Merit software) is clear and simple.	5	4	3	2	1
3	The time spent using CALL is enough.	5	4	3	2	1
<i>CALL (Merit software) interface is:</i>						
4	easy to understand.	5	4	3	2	1
5	attractive	5	4	3	2	1
6	colorful	5	4	3	2	1
7	consistent throughout the whole program.	5	4	3	2	1
8	CALL provides me with correct feedback.	5	4	3	2	1
9	The feedback provided by CALL enhances my learning.	5	4	3	2	1
10	I feel comfortable using CALL.	5	4	3	2	1
11	CALL is a stress-free environment for learning English.	5	4	3	2	1
<i>CALL increases my interaction with</i>						
12	my teacher.	5	4	3	2	1
13	my classmates.	5	4	3	2	1
14	the software content.	5	4	3	2	1

15	the software interface.	5	4	3	2	1
16	CALL increases my motivation to learn English.	5	4	3	2	1
17	CALL has reading activities in CALL. are more interesting and attractive than reading a book.	5	4	3	2	1
18	CALL is good for practicing English skills; reading, writing, speaking, grammar, vocabulary and listening.	5	4	3	2	1
19	CALL helps me understand the reading content better.	5	4	3	2	1
<i>CALL helps me</i>						
20	improve skimming and scanning skills.	5	4	3	2	1
21	predict the general ideas of the reading texts.	5	4	3	2	1
22	figure out the main ideas of the reading texts.	5	4	3	2	1
23	decode the details of the reading texts.	5	4	3	2	1
24	guess the meaning of new vocabulary words.	5	4	3	2	1
25	memorize vocabulary words.	5	4	3	2	1
26	recognize sequence of events in the texts.	5	4	3	2	1
27	answer critical thinking questions related to the reading texts.	5	4	3	2	1
28	recognize grammar types used in the texts.	5	4	3	2	1
29	recognize text structure and type.	5	4	3	2	1
30	distinguish between factual texts and fictional texts.	5	4	3	2	1
31	increase my reading speed.	5	4	3	2	1
32	draw conclusions.	5	4	3	2	1
33	become an independent reader.	5	4	3	2	1
34	CALL helps me improve my computer skills.	5	4	3	2	1
35	My teacher advised me to continue using CALL.	5	4	3	2	1
36	My classmates advised me to use CALL after the introductory classroom experiment.	5	4	3	2	1
37	I intend to continue using CALL in my other English classes.	5	4	3	2	1
38	I intend to use CALL at home.	5	4	3	2	1
39	I like having CALL as part of my learning experience.	5	4	3	2	1
40	I advise my classmates to continue using CALL.	5	4	3	2	1