



## **Enhancing the English Reading and Writing Skills of Palestinian English Majors by Using CALL**

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### **Abstract:**

This study investigates enhancing the English Reading and Writing Skills of Palestinian English Majors by Using CALL. The study was conducted at the English Department in Hebron University in the second semester of the academic year 2008-2009. The focus of the study is the Integrated Language Skills course. The population comprised 104 students. The students took the reading and writing portions of a standardized English language test, and a questionnaire was used to assess the achievement of the control group and the experimental group. The two researchers investigated whether there was a significant difference between the two groups in four dimensions, namely, computer anxiety, computer importance, attitudes, and productivity. The results indicate that CALL enhanced the Reading and Writing skills as evidenced by the statistically significant differences in the post-test between the control group and the experimental group. Also, using CALL has been shown to include the added advantages of promoting motivation, increasing self-confidence, encouraging learner-centeredness and decreasing the anxiety felt by the students. Moreover, CALL makes EFL enjoyable, meaningful, motivating relevant, and exciting. Finally, the results of this study revealed that using CALL enhances the reading and writing skills and proficiency of English majors. The two researchers conclude by offering some practical recommendations on using CALL to enhance English language skills of English majors at Hebron University.

**Key words:** Enhancing Language Skills, CALL, Reading, Writing, Anxiety, Motivation

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## المخلص:

تبحث هذه الدراسة تعزيز مهارات القراءة والكتابة في اللغة الانجليزية للطلبة الفلسطينيين في تخصص اللغة الانجليزية؛ وذلك باستعمال طريقة تعليم اللغة بواسطة الكمبيوتر. وقد تم إجراء هذه الدراسة في قسم اللغة الانجليزية في جامعة الخليل في الفصل الدراسي الثاني من السنة الأكاديمية (2008/2009). وكان تركيز الدراسة على مساق مهارات اللغة الانجليزية المدمجة. وتكون مجتمع الدراسة من (104) طالباً وطالبة. وقد تم إعطاء الطلبة جزئي القراءة والكتابة من امتحان مقنن في اللغة الانجليزية وبالإضافة إلى ذلك استعمل الباحثان استبانته؛ لتقييم التحصيل اللغوي للمجموعة الضابطة والمجموعة التجريبية لمجتمع الدراسة. وقد تحرى الباحثان وجود فرق هام بين هاتين المجموعتين في أربعة أبعاد وهي: القلق من استخدام الكمبيوتر، وأهمية الكمبيوتر، واتجاهات الطلبة حيال الكمبيوتر، والإنتاجية اللغوية للطلبة. وقد بينت نتائج هذه الدراسة أن طريقة تعلم اللغة الانجليزية بواسطة الكمبيوتر والانترنت قد عززت مهارات القراءة والكتابة في اللغة الانجليزية بدليل وجود فروق ذات دلالة إحصائية في الامتحان البعدي بين المجموعة الضابطة والمجموعة التجريبية لصالح المجموعة الأخيرة. وكذلك كان لاستعمال طريقة تعلم اللغة الانجليزية بواسطة الكمبيوتر والانترنت مزايا مثل تشجيع التعليم الذي يعزز دور الطالب، وتخفيف القلق الذي يشعر به الطلبة. وكذلك فإن هذه الطريقة تجعل تعلم اللغة الانجليزية أمراً ممتعاً ومثيراً وذو معنى ومحفزاً وله علاقة بالطالب. وأخيراً فقد كشفت نتائج هذه الدراسة أن استعمال طريقة تعلم اللغة الانجليزية بواسطة الكمبيوتر والانترنت قد عززت مهارتي القراءة والكتابة وكفاءة الطلبة في تخصص اللغة الانجليزية. واختتم الباحثان هذه الدراسة بتقديم بعض التوصيات العملية حول استخدام طريقة تعلم اللغة الانجليزية بواسطة الكمبيوتر والانترنت لتعزيز مهارات اللغة الانجليزية لطلبة تخصص اللغة الانجليزية في جامعة الخليل.

## Introduction:

Technology, particularly computer technology and its myriad applications, has pervaded every aspect of modern life in this twenty-first century. One important aspect in which the use of computers has become a landmark of modernity and sophistication is using computers in language learning and teaching. In fact, this aspect has now developed into a fully-fledged field known as Computer-Assisted Language Learning, henceforth abbreviated as (CALL). Many studies have been conducted in various parts of the world to assess the advantages and merits of CALL at both the school level as well as at the university level (Meskill, 1996; Warschau-

er and Healey, 1998; Stern, 2004; Vi 2005, Farrah, 2006; De Assis, 2007; Conrad and Munro, 2008). To the researchers' best knowledge, no empirical studies have ever been conducted in Palestine to address this crucial issue in English language teaching. Though the introduction of computers in schools was started by the Ministry of Education in Palestine in the 1990s, to the researchers' best knowledge, with the exception of Tushyeh's (2008) brief exploratory study about the availability and use of computers and technology in English language teaching in Palestinian schools and universities, no empirical studies have ever been conducted in Palestine to address this crucial issue in English language teaching.

With this in mind, the present two researchers have decided to implement an empirical study to assess the effects of using CALL in a required English language course, namely, Integrated Language Skills, offered for English majors in the English Department of Hebron University, Hebron, Palestine.

Computer Assisted Language Learning (CALL) is an area in the educational field that investigates the role of information and communication technologies in language learning and teaching. It has experienced rapid growth in recent years. The introduction of the Internet and the computer has initiated the prospect of online learning and computer applications in language learning as well. There are a number of interrelated terms that are used in this area by TEFL methodologists and practitioners, such as Computer Assisted Instruction (CAI) and Computer Mediated Communication (CMC). There are slight differences in the meaning of each of them. In this study, the researchers will use the term CALL to apply to the use of computer and other Internet resources in language learning.

CALL has many advantages. It is in line with the learner-centred approach as it generates motivation, interest, and independent learning. Using CALL enhances language skills especially reading and writing. Besides it provides learning at the learner's own pace and reduces anxiety.

The following sections provide a brief literature review about the rise of CALL, its advantages and limitations, and its uses to enhance reading and writing skills.

## 1. The Rise of CALL

CALL development can be traced back to the sixties starting with the PLATO project and the Computer-Based-Foreign-Language-Teaching project at Stanford University which were among the pioneer projects in CALL. A programming language, TUTOR, was developed for doing instructional tasks (Ahmad et al, 1995). They were designed within the realm of "Behaviorism" which furnished the background to the "Structural View" which considers language as a system of structurally related elements for the coding of meaning (Richards and Rodgers, 1986). Behaviorists work on the assumption that learners are passive. According to them, learners learn new information in response to a properly structured environment. In the light of current development in language teaching, structural exercises and drills may be regarded as outdated. The introduction of the personal computer in the early 1980's, which occurred about the same time as the drawbacks of Behaviorism became apparent, facilitated learning by discovery. Behaviorism emphasized imitation, repetition and shaping. No role was given to the learners who usually responded mechanically as the focus of Behaviorism was learning through stimulus-response. Behaviorism as demonstrated by Skinner's Verbal Behaviorism was vehemently criticized by Chomsky. Thus, Behaviorism gave way to cognitive psychology and structuralism was supplanted by Generative Linguistics (Chomsky, 1957: Chomsky,

1965). The language learners came to be viewed as active learners, formulating and testing hypotheses about the language. This paved the way to the introduction of the communicative approach that took a prominent role by emphasizing the use of language rather than the forms themselves. According to this approach, what is emphasized is interaction and negotiation of meanings through carrying out meaningful tasks (Warschauer & Healey, 1998).

## 2. Advantages of CALL

Many researchers and educators have argued that using CALL has several advantages. Vi (2005) indicates that the computer has offered language teachers and learners a source of authentic materials, tools for communication and tools for improving language skills. First, the computer-networked-learning environment facilitates the language teaching and learning by providing teachers and learners with valuable sources of materials. Secondly, computer network has been seen as a useful tool for communication. The advantage for computer-mediated communication brought about by the Internet is that learners are given an opportunity to interact with others. The online environment also enhances communication between teachers and learners. Computer based communication technology also provides tools for language learners to improve their language skills. The use of technology in foreign language learning also appears to influence the development of

communicative skills. Moreover, the network environment enhances a new form of language learning, i.e., distance learning. Finally, virtual trips enabled by the Internet offer students an opportunity to visit countries and learn about the people, their languages and their cultures (Vi, 2005).

Egbert and Hanson-Smith (1999) indicate that Internet communication can help teachers and learners create many of the conditions for an optimal learning environment. According to them, it increases self-esteem by empowering both the teacher and student regardless of certain physical challenges or social and cultural differences. They add that it encourages and motivates students to become involved in authentic projects and to write for real audience, their peers, instead of merely composing for the teachers. Finally, they indicate that it promotes critical thinking, makes learning relevant and allows both teachers and students to participate cooperatively in the education process.

Sauro (2009) investigated the impact of two types of computer-mediated corrective feedback on the development of adult learners' L2 knowledge: (1) corrective feedback that reformulates the error in the form of recasts, and (2) corrective feedback that supplies the learner with metalinguistic information about the nature of the error. There were two groups, the metalinguistic group and the control group. Results showed no significant advantage for either feedback type on immediate or sustained gains in target form knowl-

edge, although the metalinguistic group showed significant immediate gains relative to the control group.

Waxman, Lin and Michko (2003) conducted a study to estimate the effects of teaching and learning with technology on students' cognitive, affective and behavioral outcomes of learning. 282 effect sizes were calculated using statistical data from 42 studies that contained a combined sample of approximately 7000 students. The mean of the study-weighted effect sizes averaging across all outcomes was 410 ( $p < .001$ ), with a 95-percent confidence intervals (CI) of 0.175 to 0.644. This result indicates that teaching and learning with technology has a small, positive, significant ( $p < .001$ ) effect on student outcomes when compared to traditional instruction

### 3. Disadvantages of CALL

On the other hand, some researchers and educators noted the disadvantages of CALL. Vi (2005) says that the most important challenge is the issue of access. Students must have computer and Internet access. Therefore, students meet with difficulties when technology is not always as reliable as it should be and Internet access is not always available. This situation is commonplace in quite a few English as a foreign language contexts. Financial barriers include the cost of setting up a network in the schools, which can be expensive. Financial barriers also include the investment in training. Moreover, searching for materials online can sometimes be time-consuming and frustrating. There are

also still limitations on navigation and hyperlink structures in the networked learning environment, which can make learners get lost. Another challenge to the use and implementation of CALL in the foreign language classroom are the pedagogical changes. The changes in pedagogy, teachers' and learners' roles have implied the difficulties of the network environment in English as a foreign language contexts.

Bates and Poole (2003) indicate that there are barriers to effective use of CALL. First of all, classrooms need to be technologically appropriate for the planned use. Second, all forms of technology-enhanced teaching need more preparation time by teachers. Third, if it is intended for the students to make extensive use of the Internet, consideration should be given to reducing classroom time to allow both teacher and students greater opportunity for online work. Finally, the gains in using technology in these ways to enhance classroom teaching tend to be of a qualitative nature and hard to measure. Bates and Poole (2003) also say that one of the major worries of instructors in teaching online is the potential for cheating. Cheating online comes in several main forms such as plagiarism, ghost writing when a friend or a colleague helps or does the whole work instead of the registered student, or breach of copyright when the students use substantial parts of someone else's work without permission. A lot of plagiarism is not so much due to unethical students as to laziness or ignorance.

Despite these advantages and obstacles

in using CALL, Vi (2005) points out that what has been offered by the computer network technology is far too beneficial to be ignored. There is no doubt that the computer network technology e.g. the Internet and the World Wide Web offers teachers and learners a vast amount of materials and communication possibilities to enhance their language teaching and learning

#### **4. Using CALL to Enhance Reading and Writing Skills**

The following sections will review some studies that are related to enhancing reading and writing skills by CALL. The first section will be about enhancing reading skill and the second will be about enhancing writing skill.

##### **4.1 Using CALL to Enhance Reading Skill**

Several studies have been conducted in recent years on using CALL to enhance reading skills. Bonk and Zhang (2008) indicate that foreign language courses might have students read online newsletters, newspapers, magazines, and other foreign correspondence. The skills and objectives include learning authenticity, learner motivation and engagement, and skills comprehension and application.

Al-Abbadi (2007) examined and explored the effect of the Internet on improving university students' writing performance. The population of the study consisted of all the students in the English Language Department at Al-Isra University who were enrolled in the academic year 2006/2007. The pur-

poseful sample of the study consisted of 62 students. They were divided into two sections: section one was the experimental group which was supported by web-based software while the other section was the control group that created their articles via paper and pencil. A web page was designed and useful links and learning materials were included, and an e-mail address for the course teacher was determined. Statistical analyses were used to analyze data from the pre-test and the post-test to answer the question of the study which was: Does using the Internet to teach university students improve their writing skills as compared to the traditional method of teaching? The results showed that students who worked with the Internet had significant gains in their writing performance compared with the control group. Additionally, the students who worked with the Internet were more motivated to write than the other group. In the light of the above findings, Al-Abbadi recommended that the Internet should be incorporated into the teaching of writing and other language skills.

Computer technology can be used to help to teach reading. One of the well-known software programs on enhancing critical reading skills is the Rocket-Reader. It uses a unique computer technology to drive learning outcomes. Its AI-driven operation intelligently ascertains the level of challenge appropriate to users, guiding the user's learning. In addition, the Rocket-Reader provides a networked class environment. The Rocket Reader also harnesses com-

puter technology to provide instantaneous and valuable feedback on students' progress to teachers and students. Teachers can conveniently print class and individual reports with a click of a button. Each student's progress is saved under his/her own log-in name. So, the Rocket-Reader can train and appraise students over the longer term.

#### **4.2 Using CALL to Enhance Writing Skill**

Several studies have been conducted on the effectiveness of CALL in enhancing students' writing skills. Al-Jarf (2006) describes a cross-cultural online writing project in which three EFL college instructors in Ukraine, Russia and Saudi Arabia and their undergraduate students participated. The aim of the project was to develop students' writing skills in EFL, to develop their awareness of local and global cultural issues and events, and to develop their ability to communicate and interact with students from other cultures. Thirteen discussion threads, twenty external links, nine documents, three assignments, a photo gallery and Power Point presentations were posted in the Nicenet course site. Quantitative and qualitative analyses of the students' messages and reactions were posted. Al-Jarf says that online instruction in EFL is not widely used in Ukraine, Russia and Saudi Arabia. So the Writing Across the Borders online course was a pioneer project in those countries. The project was found to be effective and successful. The interaction between those instructors and students who belonged to two com-

pletely different cultures, political, linguistic and educational backgrounds, and different majors: Saudi vs. Ukrainian–Russian was impressive. It showed that students from different countries have common interests and common points of views regarding some global cultural issues. In their responses to the questionnaire, the students reported that they developed a global perspective as well as language and communication skills.

Egbert and Hanson-Smith (1999) indicate that one of the most significant advances in the teaching of language has been the extensive use of computers for composition. It is difficult to imagine writing as a process without the ease of revision and editing provided by the computer. When students revise by hand, the teacher hesitates to request major revisions, particularly in longer compositions. When students are freed by technology to write at length and revise globally, the focus shifts from local corrections to communication from recopying to recognizing. Furthermore, when students find an authentic audience beyond the teacher and participate in peer editing, writing becomes a communicative act between the reader and the writer.

To sum up, the introduction of CALL has a tremendous effect on language learning and teaching, and its use in our age of information technology in English language teaching has both advantages and disadvantages. There have been many studies assessing the effects of CALL. Some studies indicated several advantages of using CALL. However, other studies found disadvantages

of using CALL. Nevertheless, the advantages of using CALL definitely outweigh the disadvantages. CALL definitely enhances the reading and the writing skills of the learners. Moreover, it provides them with the motivation to learn languages, reduces anxiety and fosters learner independence. With this in mind, the researchers launched this empirical study to assess the positive effects of using CALL and in particular to see if using CALL enhances the reading and writing skills of the Eng-

## 5. Statement of the Problem

In our age of information and technology revolution, it is saddening to see that English language teaching in Palestine at both the school level and the university level is mostly done in the traditional chalk-and-talk way. This definitely leads to boredom among the students and ultimately to low levels of English language proficiency. The full potential and promise of using CALL in English language teaching have not yet been empirically explored in Palestine.

## 6. Research Questions

The study addressed the following main questions:

1. Are there differences in the attitudes of the respondents on the questionnaire dimensions (computer anxiety, computer importance, use, productivity) in relation to the following independent variables:

a) the group: (experimental, control)

b) taking computer courses (experimental, control)

c) availability of computers at home (experimental, control)

d) availability of e-mail account (experimental, control)

e) the availability of Internet access (experimental, control)

2. What is the effect of using CALL on improving the reading skills of the English majors at Hebron University?

3. What is the effect of using CALL on improving the writing skills of the English majors at Hebron University?

## 7. Significance of the Study

This study is the first empirical study conducted in Palestine on the effect of using CALL in enhancing the reading and the writing skills of English majors at the university level. The results of this study will hopefully have far-reaching implications on English language teaching in general. The researchers also hope that this study will come up with practical conclusions and recommendations that will improve English language teaching in Palestine at the university level.

## 8. Methodology

The present section discusses the population, research instruments, development of the questionnaire, the questionnaire content validity and its reliability.



## 8.1 Population

The study was conducted at the English Department in Hebron University and the data had been collected during semester 2, 2008-2009. The focus of this study was the Integrated Language Skills course. There were four sections of this course in semester 2, 2008/09. The student population comprised those students who were enrolled in the four sections, their final number being 104. The Integrated Language Skills course focuses on developing and strengthening language skills through an integrated study of reading, writing, speaking, and listening. The course is designed to challenge and enrich students who demonstrate commitment and ability to engage in this rigorous curriculum. Students are expected to demonstrate intellectual curiosity, self-discipline, and an eagerness to learn. Students will reinforce, enrich, and extend their knowledge through daily assignments and weekly projects. The objectives of the course will not be achieved unless students are intensively occupied with the assigned projects (Reading, Writing, and Listening) and other relevant assignments inside and outside the classroom.

The course aims;

- to help students develop the skills needed to successfully and confidently meet the reading, writing, listening, and speaking demands of college, work, and life.
- to help students to apply and recognize several essential concepts common in reading and writing: main

ideas, details, organization, purpose, audience, tone, inferences, and conclusions.

- to help students build their English vocabulary.

## 8.2 Research Instruments

In order to reveal the influence of the program on the achievement and the performance of the students, three research instruments were used in this study:

1. At the end of the course, both groups of students took the reading and writing portions of a standardized English language test, such as the TOEFL (See Appendix I, p: 306). The written exam was corrected by two graders and the average score was given for every student in order to avoid subjectivity and to achieve reliable results.
2. A questionnaire was used to assess the achievement of both groups of students.

The emphasis of quantitative research was on numerical data and measurable variables. The quantitative data for this research was collected through pre and post questionnaires and pre and post exams.

## 8.3 Development of the Questionnaire

The questionnaire was developed based on the literature review conducted by the researchers. After conducting a thorough literature review, the researchers developed an appropriate questionnaire that is suitable for the CALL courses

learning environment. The items were structured according to four dimensions that were found to be important to the area of CALL. The four dimensions were computer anxiety, computer importance, use, productivity

#### 8.4 Content Validity of the Questionnaire

The content validity of the questionnaire was examined against the degree to which the scale of items reflected student related dimensions of CALL courses. The content validity in this study was validated by getting two content experts in CALL to assure that each statement in the questionnaire was applicable for a Likert-scale student response.

#### 8.5 Reliability of the Questionnaire

The reliability coefficient of the questionnaire was tabulated. The result showed that the overall Cronbach Alpha Coefficient of the questionnaire is high ( $r = 0.81$ ) indicating a high degree of internal consistency, and therefore presenting a considerably reliable instrument.

In order to make sure that the two groups (experimental and control) were of the same attitudes towards computer and Internet use, a comparison was carried out to ensure that the two groups were equivalent. This was carried out using the pre-questionnaire. Table 1 shows that there is no significant difference at 0.05.

**Table 1. t-test for Equality of Means**

	Group	N	M	SD	t	d.f	Sig.
Attitude	Experimental	72	167.98	17.30	0.40	103	0.68
	Control	33	169.48	18,15			

As seen in Table 1 the two groups (experimental and control) are of the same attitudes towards computer and Internet use. This means that the two groups are equivalent.

Similarly, in order to make sure that the two groups (experimental and control)

were of the same competence in both reading and writing skills, a reading and writing pre-test was carried out to ensure that the two groups were equivalent competence-wise. Table 2 shows that there is no significant difference at 0.05.

**Table 2. t-test for Equality of Means**

	Group	N	M	SD	t	d.f	Sig.
Reading and writing pre-test	Experimental	73	14.34	4.194	-.358	99	0.721
	Control	28	14.68	4.321			

As seen in Table 2, the two groups (experimental and control) have the same competence in both reading and writing skills. This means that the two groups have the same level in reading and writing before the enrollment in the CALL program.

## 9. Results

This section presents the results of the study. First, the results of the post-questionnaire are presented and discussed. Then, the results of the post-reading

and post-writing tests are presented and discussed.

### 9.1 Results of the post-questionnaire

The researchers investigated whether there was a significant difference between the two groups (experimental and control) after the treatment with all the dimensions in general. This was carried out using the post-questionnaire. A t-test was carried out and Table 3 shows that there is a significant difference at 0.001.

**Table 3: t-test for Equality of Means**

	Group	N	M	SD	t	d.f	Sig.
Attitude	Experimental	73	177.04	11.001	4.572	104	0.001
	Control	33	164.96	15,571			

Then the researchers investigated whether there is a significant difference between the two groups (experimental and control) after each dimension. A t-

test was carried out and Table 4 shows that some dimensions have a significant difference and others have no significant difference.

**Table 4: t-test for Equality of Means for each dimension**

	Group	N	M	SD	T	d.f	Sig.
Computer anxiety	Experimental	73	19.10	11.00	-.393	104	.695
	Control	33	19.66	15.57			
Computer importance	Experimental	73	80.72	6.80	4.654	104	0.001
	Control	33	72.96	6.62			
Attitudes	Experimental	73	37.83	4.73	1.905	104	0.060
	Control	33	35.81	5.67			
Productivity	Experimental	73	39.36	3.19	3.859	104	0.001
	Control	33	36.51	4.18			
Total	Experimental	73	177.04	11.001	4.572	104	0.001
	Control	33	164.96	15.571			

As Table 4 shows, two dimensions showed significant differences (computer importance at 0.001, and productivity in the classrooms at 0.001). This result agrees with Newby and Fisher's results (1998) which found associations between anxiety and perceived usefulness of a computer course. The researchers believe that less anxious students find a computer course useful. However, the findings of this study disagree with those of Lambert et al (1989) who found that increasing use

of computer programs for undergraduate psychology education had raised the impact of computer anxiety on educational performance. The result reached by the two researchers in this study is expected because using the computer increases confidence and decreases anxiety.

As far as whether there is a significant difference between taking training courses in computer use and the four dimensions, no significant differences were revealed as shown in Table 5.

**Table 5: t-test for Taking computer related courses**

I have taken computer related courses	Group	N	M	SD	T	d.f	Sig.
Total	Yes	67	173.74	13.51	.454	104	0.651
	No	39	172.48	14.22			

Computer anxiety	Yes	67	18.49	6.67	-1.598	104	0.113
	No	39	20.64	6.67			
Computer importance	Yes	67	78.91	8.67	0.930	104	0.355
	No	39	77.28	8.73			
Attitudes	Yes	67	37.68	5.58	1.268	104	0.208
	No	39	36.38	4.11			
Productivity	Yes	67	38.65	3.68	0.630	104	0.530
	No	39	38.17	3.89			

This means that it seems that there are no significant differences in all the dimensions on whether students had taken computer training courses or not. It seems that taking part in such courses is not effective in improving the students' attitudes towards computer use.

A t-test was carried out to investigate whether there is a significant difference between availability of computers at home and the four dimensions. Two dimensions showed significant differences and the others revealed no significant differences as shown in Table 6.

**Table 6: t-test for availability of computers at home**

I have taken computer related courses	Group	N	M	SD	T	d.f	Sig.
Total	Yes	91	172.95	13.77	-.602	104	0.548
	No	15	175.26	13.71			
Computer anxiety	Yes	91	18.16	5.91	-4.605	104	0.001
	No	15	26.06	7.51			
Computer importance	Yes	91	78.56	8.30	0.725	104	0.470
	No	15	76.80	10.96			
Attitudes	Yes	91	37.64	5.09	2.228	104	0.028
	No	15	34.53	4.47			
Productivity	Yes	91	38.58	3.81	0.683	104	0.496
	No	15	37.86	3.37			

As Table 6 reveals, there is a significant difference for the dimension of anxiety (0.001) and attitudes (0.028). This means that the students who have computers at home have less anxiety. This is natural as the students who own personal computers at home and who are familiar with their use will definitely feel less anxiety than those who do not have/own computers. This result agrees with the findings of Stern (2004) who found that previous experience and support were positively related to computer self-efficacy, and computer self-efficacy was negatively related to anxiety and positively related to usage. Also Mizrahi and Shoham (2004) found that computer use, especially home use, is strongly and consistently associated with a positive computer attitude. Moreover, Table 6 reveals that the students who have computers at home have a more positive attitude towards the computer and Internet use. Once again, the availability of computers at home indicates that the students in this study have a positive attitude towards Internet and computer use. This result

agrees with the findings of Joiner et al (2007) who found that there was a significant and negative relationship between Internet anxiety and Internet use. Those who were more anxious about using the Internet used the Internet less. There was also a positive and significant relationship between Internet use and Internet identification. The two researchers agree with these views because the availability of computers at home entails more of their use and creates confidence on the part of these users.

A t-test was carried out to investigate whether there was a significant difference between the availability of an e-mail account and the four dimensions. Only a significant difference was revealed on the anxiety dimension as shown in Table 7. This result agrees with Newby and Fisher (2004) whose results showed that there were statistically significant associations between achievement and the attitudinal variables of anxiety, enjoyment and usefulness of the computer course.

**Table 7: t-test for availability of email account**

I have an Email account	Group	N	M	SD	T	d.f	Sig.
Total	Yes	75	172.76	13.28	-.608	104	0.544
	No	31	174.54	14.89			
Computer anxiety	Yes	75	17.08	5.10	-6.079	104	0.001
	No	31	24.61	7.23			

Computer impor- tance	Yes	75	79.34	7.96	1.932	104	0.056
	No	31	75.80	9.93			
Attitudes	Yes	75	37.60	5.11	1.233	104	0.221
	No	31	36.25	5.05			
Productivity	Yes	75	38.73	3.73	1.077	104	0.284
	No	31	37.87	3.78			

As Table 7 reveals, there is a significant difference for the dimension of anxiety (0.001) This means that the students who have an e-mail account have less anxiety. The researchers believe that having an e-mail account makes the students less worried as they are familiar with some e-mailing applications (composing, sending, attaching files, and downloading). This result agrees with Conrad and Munro (2008) who

found that computer efficacy was positively related to positive attitudes. Similar findings were revealed regarding the availability of an Internet connection at home. A t-test was carried out to investigate whether there is a significant difference between availability of an Internet connection and the four dimensions. Only a significant difference was revealed on the anxiety dimension as shown in Table 8.

**Table 8: t-test for availability of Internet access**

I have an Internet connection at home	Group	N	M	SD	t	d.f	Sig.
Total	Yes	54	172.87	13.65	-0.31	104	0.754
	No	52	173.71	13.92			
Computer anxiety	Yes	54	16.77	5.42	-4.20	104	0.001
	No	52	21.88	7.00			
Computer impor- tance	Yes	54	79.83	7.87	1.85	104	0.066
	No	52	76.88	9.27			
Attitudes	Yes	54	37.81	5.25	1.25	104	0.214
	No	52	36.57	4.92			
Productivity	Yes	54	38.44	3.69	-.102	104	0.919
	No	52	38.51	3.84			

As Table 8 reveals, there is a significant difference for the dimension of anxiety (0.001). This means that the students who have an Internet access, have less anxiety. No significant differences were revealed regarding the remaining dimensions. Again this result is in agreement with that found by Newby and Fisher (2004) who showed that there were statistically significant associations between achievement and the attitudinal variables of anxiety, enjoyment and usefulness of a computer course. The two researchers found higher achievement in both reading and writing skills among the experimental

group because students using computers in learning found them useful and enjoyable, experiencing less or no apprehension about them.

### 9.2 Reading post-test:

The researchers investigated whether there is a significant difference in the performance of the two groups (experimental and control) after the treatment in the reading skill. This was carried out using the post-reading test. A t-test was carried out. Table 9 shows that there is a significant difference in this respect at 0.001.

**Table 9: t-test for Equality of Means**

	Group	N	M	SD	t	d.f	Sig.
Reading Post-test	Experimental	73	16.58	3.67	2.131	103	0.035
	Control	32	15.00	33,11			

### 9.3 Writing Post-test:

Similarly, the researchers investigated whether there is a significant difference in the performance of the two groups (experimental and control) after the

treatment in the writing skill. This was carried out using the post-writing test. A t-test was carried out. Again, Table 10 shows that there is a significant difference at 0.003.

**Table 10: t-test for Equality of Means**

	Group	N	M	SD	t	d.f	Sig.
Writing Post-test	Experimental	73	13.03	2.29	3.03	103	0.003
	Control	32	11.44	2,83			



Examining the statistically significant differences between the control group and the experimental group as revealed by the scores in the post tests, which clearly favored the experimental group, the two researchers found that three of the four student-related dimensions of CALL courses correlated positively with the better performance of the experimental group. These three dimensions are computer use, computer importance, and productivity. The fourth dimension, mainly, anxiety, correlated negatively. This is in line with the results of the studies reviewed below.

## 10. Discussion and Conclusions

To discuss the student-related four dimensions of CALL, the two researchers found that students who had positive attitudes towards CALL did better than students who had negative attitudes. This was reflected in both the reading post-test and the writing post-test. Also students who reported having taken computer courses did better than those who hadn't taken them. It is worthwhile mentioning that the one general course in computer use which is offered by Hebron University, namely, Computer Applications, is not enough to familiarize the students with computers and improve their computer and Internet skills. Some students take other courses off campus e.g. in privately-owned and operated education centers.

Availability of computers at home is another essential element in developing positive attitudes towards CALL courses. The availability of comput-

ers at home encourages students to use them more frequently, thus developing their experience in CALL.

Finally, the availability of an e-mail account and Internet access are of vital importance in CALL. The results of this study corroborated this postulation. Students who had an e-mail account and access to the Internet access did better than those who had neither an e-mail account nor access to the Internet. The results of this study related to the positive effects of the use of CALL in enhancing the reading skills agree with the results of Egbert and Hanson-Smith (1999) who found that computers can help in the reading skills of skimming, scanning, recognizing topic sentences and supporting details, predicting what will come next, noticing transition markers, reading quickly, and evaluating the validity of a source.

Moreover, the results of this study agree with the findings of Al-Jarf's (2008) study about examining the effects of using online reading activities on EFL-freshman students' reading comprehension skills development. Her results showed that in learning environments where technology is unavailable to EFL students and instructors, as it is the case with EFL students at Palestinian universities including Hebron University, the use of online activities helped motivate and enhance EFL students' reading skills.

Thus, we can see that using CALL, in general, enhanced the reading comprehension skills of the students as attested by the results of this study where the experimental group achieved better results in the reading post-test than the

control group.

The results of this study related to the positive effects of using CALL in enhancing the writing skills of students also agree with the results of Al-Ab-badi (2007) whose results showed that students who worked with the Internet added significant gains in their writing performance compared with the control group. Additionally, the students who worked with the Internet were more motivated to write than the other group.

Moreover, the results of the cross-cultural online writing project carried out by Al-Jarf (2006) lend support to the findings of the present study. Al-Jarf (2006) indicated that using CALL developed the students' writing skills in EFL.

The results of this study also agree with the findings of Egbert and Hanson-Smith (1999). They indicated that one of the most significant advances in the teaching of language has been the extensive use of computers for composition where students find an authentic audience beyond the teacher and participate in peer editing; writing becomes a communicative act between the reader and the writer.

To sum up, in addition to enhancing the reading and the writing of the experimental group in this study, as evidenced by the statistically significant differences in the post-tests between the control group and the experimental group, using CALL in EFL teaching has the added advantages of promoting motivation, increasing self-confidence, encouraging learner-centeredness and decreasing the anxiety felt by the stu-

dents. Moreover, CALL makes EFL enjoyable, meaningful, motivating, relevant, and exciting.

Finally, the results of this study revealed that using CALL enhances the reading and writing skills and proficiency of English majors. Moreover, using CALL in reading and writing is closely related to less anxiety and more familiarity in using the computer and the Internet. The study revealed that the students enjoyed CALL instruction and developed confidence in using computers and the Internet. There was no boredom among the students. In short, using CALL enhances learner independence following the tenets of the learner-centered approach where students have a lot of interaction with each other.

## 11. Recommendations

Based on the results of this study, the two researchers recommend the following:

1. Similar studies should be carried out on using CALL in teaching English and other languages at other Palestinian universities.
2. The required English course Integrated Language Skills should be offered as an online course.
3. Reading and Writing courses offered by the English Department to English sophomores and juniors should be at least in part taught using CALL.
4. English department instructors who teach English language skills especially reading and writing should be trained in online courses and methods of using CALL.

5. Teachers who teach reading and writing should organize groups of students who communicate with each other online and establish connections between them.

6. The English Department should encourage English majors to establish their own websites whereby they share their experiences and discuss their difficulties.

7. English majors should be encouraged to learn from each other whereby the experienced students teach the weak ones.

8. English language teachers should use online educational resources for a variety of purposes

9. Other skill-based courses similar to the Integrated Language Skills course should be taught via CALL.

10. Hebron University should allocate two or more large halls especially equipped for teaching online courses. Also, there is a great need for both students and teachers at Hebron University to be trained in CALL instruction.

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#### Appendix I: A small Portion of the Test

Hebron University: English Department

Integrated Language Skills (22233)

Date: 06-06-2009

Name: \_\_\_\_\_

University No: \_\_\_\_\_

Section \_\_\_\_\_

Question One: Read the following two passage.

Passage 1 (questions 1-12) (12 points)

1. Simply being bilingual doesn't qualify someone to interpret. Interpreting is not merely a mechanical process of converting one sentence in language A into the same sentence in language B. Rather, it's a complex art in which thoughts and idioms that have no obvious analogues from tongue to tongue – or words that have multiple meanings – must quickly be transformed in such a way that the message is clearly and accurately expressed to the listener.

2. At one international conference, an American speaker said, "You can't make a silk purse out of a sow's ear," which meant nothing to the Spanish audience. The interpretation was, "A monkey in a silk dress is still a monkey"- an idiom the Spanish understood and that conveyed the same idea.

3. There are two kinds of interpreters. Simultaneous and consecutive, each requiring separate talents. The former, sitting in an isolated booth, usually at a large multilingual conference, speaks to listeners wearing headphones, interpreting what a foreign-language speaker says as he says it – actually a sentence behind. Consecutive interpreters are the ones most international negotiators use. They are mainly employed for smaller meetings without sound booths, headphones, and other high-tech gear. Equally taxing in its own way, consecutive interpretation also requires two-person teams. A foreign speaker says his piece while the interpreter, using a special shorthand, takes notes and during a pause, tells the client what was said. Consecutive translation constitutes the basis of both types of interpretation, as it develops the requisite analytical skills. While 99 percent of interpreter's work is

done in simultaneous mode, consecutive translation is used whenever a high degree of accuracy is required.

Circle the correct answer

1. What is the purpose of this passage?
  - A. To explain the scope of interpreting
  - B. To differentiate between simultaneous and consecutive interpreters
  - C. To state the qualifications of an interpreter
  - D. To point out the importance of an interpreter
  
2. The underlined word “analogues” in paragraph 1 is closest in meaning to
  - A. dictionaries
  - B. scripts
  - C. counterparts
  - D. anthologies
  
3. The underlined word “converting” in paragraph 1 is closest in meaning to
  - A. understanding
  - B. changing
  - C. reading
  - D. concluding
  
4. The author implies that most people are of the opinion that the skill of interpreting is
  - A. simpler than it really is
  - B. very complex and demanding
  - C. highly valued and admired
  - D. based on principles of business
  
5. The example of the expression “You can’t make a silk purse out of a sow’s ear” in paragraph 2 is used to
  - A. show the differences in language A and language B
  - B. stress the importance of word for word translation
  - C. emphasize the need for translation of the meaning of the utterance
  - D. to point out the differences in attributes of animals in English and Spanish
  
6. The underlined phrase “The former” paragraph 3 refers to
  - A. simultaneous interpreters
  - B. the booth
  - C. consecutive interpreters
  - D. separate talents

7. It can be inferred from the passage that a necessary prerequisite of being a translator is
- A. being a linguist
  - B. being bilingual
  - C. being able to use high-tech equipment
  - D. working well with people
8. According to the passage, which of the following would a consecutive interpreter be used for?
- A. A business transaction between two foreign speakers.
  - B. A large meeting of many nations
  - C. A translation of a foreign book
  - D. An interpretation of a major literary work
9. Based on the description given in the passage, what would a simultaneous interpreter be most in need for?
- A. A dictionary and a phrase book
  - B. Advanced technical style in writing
  - C. Headphones and a booth
  - D. Shorthand skills and a notepad
10. The underlined word “taxing” in paragraph 3 is closest in meaning to
- A. expensive
  - B. rewarding
  - C. worrisome
  - D. demanding
11. It can be inferred from the passage that simultaneous translation
- A. would be learned after mastering the skills of consecutive translation
  - B. is more accurate than consecutive translation
  - C. does not involve analytical skills
  - D. is not in high demand
12. The underlined word “requisite” in paragraph 3 is closest in meaning to
- A. necessary
  - B. accurate
  - C. excellent
  - D. meagre

Question Two: Write an essay about one of the following topics: ( 150-180 words)

- A. A behaviour I wish people would change
- B. Qualities I look for in a friend