Assessing Reading Comprehension Strategies under Three Learning Conditions

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ABSTRACT

The purpose of this study was to measure reading comprehension strategies when Tell Me More and Sweet English software were utilized to enhance the traditional reading comprehension practice. The study focused on evaluation of four strategies (i.e., scanning, skimming, inferencing and headline guessing) in reading comprehension in three different classes at an English language Institute in Iran. In addition, the study reported the relationship between learner attitudes and learner perceptions toward the use of the software. To do so, one hundred and twenty students studying at Jam-e-Jam Institute in Tehran were selected. In the first step, CELT was administered and among 83 participants who were found to be homogeneous, sixty were selected and assigned randomly to three groups of 20, one as the two experimental groups and the other as the control group. In the second step, subjects in both experimental and control groups were tested on a researcher-prepared reading comprehension test as a pretest in the first session. In the following 12 sessions, the treatment was administered to the participants. At the end of the semester, the subjects in all three groups were given the same test of the pre-test as post test. The test result showed that CALL groups (the experimental groups) surpassed slightly the control group. The use of Tell Me More produced a significant difference in learners' inferencing and scanning but not skimming and headline guessing as compared to Sweet English. The result of survey indicated an overall positive attitude toward Tell Me More. A significant correlation was reported between student attitudes and student perception.

Keywords: CALL; scanning; skimming; inferencing; headline guessing

Introduction 1996). Meanwhile, application of CALL (computer Technological advances are constantly opening assisted language learning) is experiencing a new doors towards all aspects of human life. During renaissance in the modern language teaching and the past decade, use of computers in educational learning arena, with a high growth of popularity (Chapelle, 2002). From the point of view of TEFL, settings has increased dramatically (Warschauer,



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CALL programs help improve learning speed, individualized instruction, authenticity and efficiency.

At most colleges and universities, while the two basic skills: listening and speaking, occupy the forefront of language investigation; the importance of reading is overlooked. Elliott, (1997) in one of his articles writes: "teachers tend to view reading as the least useful of basic language skills; therefore they generally sacrifice teaching reading in order to spend valuable class time on other areas of the language" (p. 99). Many learners of English as a foreign language, even after years of attending English courses, have major difficulties with reading comprehension. And this happens in most classes because both teachers and students do not pay attention to reading thoroughly might be due to the shortage of interest in reading or because of not knowing how to apply the strategies of reading comprehension. The purpose of this study was to solve this problem by providing native speaker's authentic language in the form of audio and video files which seem to be interesting and learners work with them enthusiastically. One of the most demanding part in software CALL is its selfdirected, self assessing, self monitoring activity, in which the learner can take a more active role. Pemberton (1996) defines self directed learning as the technique used in order to direct one's own learning. It refers to "learning in which the learners themselves take responsibility for their own learning. Thomson (1996) also believed that autonomy is often used interchangeably with self direction, and it refers to the ability to take charge of one's own learning. Again, Pemberton (1996) stated that autonomy is a capacity for self directed learning and a way of organizing learning. In CALL, reading passage is read by a native speaker at special speed which is appropriate for the level of students, and for keeping the students fresh it contains authentic real life materials. One of the most important aspects of using CALL in the classroom is, students are free from anxiety and there is no peer pressure which inhibits them from working easily.

A Brief History of CALL

We find ourselves immersed in a "technological revolution" (Moeller, 1998) -- a revolution that has rapidly reshaped many aspects of our lives and, by all accounts, promises to continue in the future. Since its inception in the 1940s, the computer has been major force behind these changes. The computer and its associated applications (software, the Internet, networks, servers) have altered the face of business, science, communication, warfare, entertainment, transportation, and education- all within a relatively short period of time. Today, most members of society in developed nations have access to computers and thus have open doors to explore and utilize its applications. The immense power of the computer is clearly evident by how much our society presently relies on its functions and capabilities.

With the widespread accessibility of computers, teachers and administrators face the question of what roles computers can play in education. Like other disciplines, education has been inundated with technological innovations and experienced varying degrees of success. The area of language learning is no exception. Computer Assisted Language learning, CALL, is often a misunderstood term because it does not provide a reference point from which a common understanding is easily achieved. For this reason a detailed description of a CALL application within a specific context is needed before discussions can move forward. This may explain the reason, why much of the research focuses on practical applications of computers in language learning environments. CALL had its beginnings in the 1950s and 1960s and has since gone through many transformations. The shifts in CALL reflect dominant educational theories and the available computer technology of the time. Warschauer and Healey (1998) have divided the history of CALL into three distinct phases: behaviouristic CALL, communicative CALL and integrative CALL. These three stages coincide with specific levels of technology and certain pedagogical theories (Warschauer & Healey, 1998).

The significance of the incorporation of CALL

into language learning and teaching was noticed in links and references to dictionaries, and glossary. All 1983, during one of the annual TESOL conferences the mentioned applications serve to enhance held in Toronto where more than ten percent of learning, and comprehension of texts in the case of reading comprehension; "they help to make the presentations concerned CALL and also some software was demonstrated. Unquestionably, the language come alive to students for whom it is largely a distant abstraction" (Warschauer & Healey, idea of the application of a computer in foreign language learning and teaching was brought about 1998). Being able to manipulate learning materials, by the rapid advent of overwhelming learners recreate language for themselves. Text computerization. Though the use of computers was, manipulation programs, which will be described in until recently, restricted only to specialists, details in the following chapter, can serve as a good nowadays it is more and more common and example here. Activities provided by such programs accessible for ordinary people, and more and more encourage students to explore language, to become often incorporated into language instruction active learners rather than passive ones as it is often curricula. Thus, many teachers around the world in the case of students using printed textbooks. There have had to face the problem of adapting their was much research carried out to assess the learners' teaching methods to the new, promising and attitudes towards computer-mediated language potentially successful ways of foreign language acquisition. It turned out that students were strongly instruction with the help of the computer. The role of in favor of the method as it "delivered a high quality the computer seems to be more significant when independent learning experience" (Brett, 1996). Computer software presents information in a noncompared to ordinary textbooks and tapes with listening comprehension checks and such recent linear way which assists learners in developing advances in applications of the computer in thinking skills and becoming "the creators not just education like CALL, have provided a new resource the receivers of knowledge" (Lee, 2000, p. 2). of authentic language input for language classrooms (Brown, 1994; Brucklachar & Gimbert, 1999; Kang **CALL in EFL Reading Instruction** & Dennis, 1995; Liaw, 1997).

The unique property of the computer as a medium for education is its ability to interact with the student. Books and tape recordings can tell the student what the rules are and what the right solutions are, but they cannot analyze the specific mistake the student has made and react in a manner which leads him not only to correct his mistake, but also to understand the principles behind the correct solution (Kenning & Kenning, 1983, p. 2).

The computer focuses on it's user's progress, his mistakes and problems, and guide the student through the learning process adapting its pace to the student's abilities and the learning results he has achieved. The advantage of the computer is, moreover, visible in the way in which the text is presented. The computer offers combination of a large range of multimedia aids like sound, graphics, photographs, animation and moving video, direct

Research that focuses on L2 reading dates back to the 1960s and investigates the variables involved in bottom- up approaches (word recognition) and top- down approaches (prior knowledge, reader characteristics), and the interactive approach (orthography, semantic knowledge, text, content, organization, etc) (Bernhardt, 1986; Carrell, Devine & Eskey, 1988; Paran, 1997; Anderson & Pearson, 1984). When adding a third variable, technology, the L2 reading process becomes even more complicated (Chun & Plass, 1997).

According to LeLoup and Ponterio (2003), studies on the use of CALL to improve reading skills emphasized the use of glossaries and vocabulary acquisition. In both areas, students using computer technologies to assist in comprehending reading passages and identifying vocabulary outperformed control groups of students who did not have CALL assistance available or chose not to use it (Cubillos,

1998). For the last twenty years or so, language teachers have recognized the role the computer might play in language learning. Today's technology lends itself well to the development of reading skill. In fact Reading skill is, arguably, better acquired using different sorts of flexible learning materials which allow students to work at their own pace with time to think and without peer-group pressure not to ask for too many replays or to ask too many questions. However, communicative skills such as not just knowing what to say but also how to say it and how to react to what others say can less easily be acquired or practiced via the computer.

In the early years of CALL (Computer Assisted Language Learning) there were relatively unsophisticated programs that supported reading comprehension and simple writing tasks or a range of word games such as hangman, unscrambling text and gap - filling, As the technology has developed so too has the computer literacy and the ability of many language teachers at primary, secondary and tertiary levels all over the world to design, adapt or manipulate CALL software. (World CALL, the inaugural world conference on computer-assisted language learning which was held in Melbourne in July this year with 400 participants, bears witness to this). Cunningham (1998) traces these developments in Australia in a recent issue of Babel. But it is only comparatively recently, that digital technology, small computers with large memories have expanded the possibilities for language learning.

One of the most significant advantages of using CALL in the development of reading comprehension skills, often mentioned by many CALL specialists and teachers like Dangerfield, Kenning, Kitao, and Warschauer, is individualized instruction offered by the computer. It is widely known that learners learning styles, pace of learning can vary significantly even if the students are assigned to the same language learning group. Learners can also vary as far as the level to which they can develop particular language skills is concerned. Thus, in one class, there can be students good at speaking, but having problems with reading comprehension and

students having their reading skill well developed, but being unable to speak fluently. Consequently, during classes dealing with reading, learners good at this field cannot further develop their skills, as they have to wait for their colleagues until they complete the task assigned to all the students. Using computers allows students to work at their own pace. Slower learners can catch up, and advanced students can do extra assignments. The computer records the work of each student which allows the teacher assess the needs and problems of individual students. Thus, he can guide the learners through the process of their reading comprehension skills development at various paces. Students can, moreover, choose the type of reading comprehension test according to their preferences, and they are not forced to do the types of exercises printed in the textbook. Computerized activities are also more challenging, interesting, motivating and they demand a lot of attention and full participation on the part of the learner.

Computers can present the text in a variety of ways apart from a plain printed one. The text can be accompanied by animation and sound which make both the text and reading more interesting. It can also be accompanied by direct references to a dictionary. By clicking a word with a mouse, the student receives the definition of the word, or its native language equivalent. Computers always provide answers to the questions concerning the text in a task, which is often not the case as far as printed tests are concerned. Not all textbooks have a key with answers, and students very often come across copies of tests without a key. When learners cannot check if the answers they have given are correct, they see no point in completing the task, so they put it aside. Even if a textbook has a key, it is often very inconvenient to turn the pages innumerable times to the last pages to check each answer. Learners could, besides, cheat and look at the answers before completing the task. All those problems are solved by a computer which provides the answers by a click of a mouse, and makes it impossible to see them until all of the exercise is done.

The study

Design

A quasi-experimental research design was employed for this study. A pre test and post test reading comprehension strategies were administered for all three groups.

Participants

One teacher and 120 students made the population of this study. Participants were supposed to be at the intermediate level. To test the aforementioned hypothesis 60 participants were selected out of 120. The participants consisted of 120 Iranian female intermediate EFL learners with the age range of 18 to 25. Gender was not a factor examined in the study. The participation was voluntary and they had already enrolled in Jam-e-Jam English Language Institute in Vanak sq. Tehran at the intermediate level April 2008. The standardized test CELT was administered as proficiency test to the subjects to obtain a homogenous sample. As a result, only 60 subjects had the required language qualification of a homogeneous sample to fulfill the purpose of this study. Therefore, because they were intact groups the authors just ignored those whose scores were not within the range of 1 standard deviation above or below the mean. Subsequently there were 3 twentystudent groups, which were assigned randomly as the two experimental groups and one control group.

Instrumentation

The proficiency test employed in this study was CELT standardized test. The test measured different skills of the English language such as reading and sub-skills such as grammar and vocabulary. There were 174 questions and the students were given 120 minutes to complete the test. A reading comprehension test designed by the authors included 40 multiple-choice questions based on four strategies: Scanning, Skimming, Inferencing and headline guessing. Two researcher-designed attitudinal four-scale Likert-scale questionnaires (Appendix) one consisting of 20 items and the other 19 items, which applied on treatment group's attitude/perception of learning performance toward the Tell Me More and Sweet English module were delivered to the treatment group students only, at the end of the study. Using a Likert-scale rating scale, students indicated their self-reported feelings experiences with both software activities, and identified perceived benefits and difficulties they encountered during the experimental learning. The computer laboratory is located in the institution and contains 20 computers. The required computer hardware included PCs with graphic and sound cards, speakers, microphones, etc.

Tell Me More

Tell Me More can be used as instruction, guided practice, and independent practice software. Each student is able to enter her/his name, while the program tracks the software at anytime. The use of sound and graphic images makes this program very appealing. A video is shown, accompanied by an audio recording. The topics introduced are often scenarios taken from daily life, with diverse themes adapted to the cultural nuances of the country or countries where the language is spoken. Following the video, they are asked to respond to approximately ten multiple-choice questions. They can click on the video link in the bottom right corner of the screen in order to see the corresponding video segment again. The package of Tell Me More is designed by Auralog Company 2005.

Sweet English

Sweet English is a locally designed CD based on the book of New Interchange developed by Jack C. Richards. This software does not have the capability of motion picture or audio .Tell Me More has a dictionary.

New Interchange 3rd Edition

The course book of New Interchange was used for control group without any audio or video facility and the text was presented as papers. The reason for choosing this particular course book and software was that they are relatively easy to access and they were popular in Iran.

Procedure

The process involved administering a researcher-developed reading comprehension test lasting for an hour to the control and two experimental groups to assure that they were homogeneous with respect to the variable of this investigation; that is, the reading. In other words, this process was done to assure that the participants were homogenous considering their reading comprehension, before the experiment. This phase was also done to make sure that the subjects do not have the knowledge of what is taught during treatment. The scores in the pretest, after being statistically processed, helped the researchers to check the initial differences existing between the groups and be confident about the equality of the groups before the experiment.

The process comprised of giving instruction to all groups during 12 sessions. The experimental groups received the treatment, and the control group received the placebo. The treatment offered in this study to the experimental groups was an instruction inspired by software procedures. The placebo included teaching reading in a traditional way, through the printed texts. The conventional activities in teaching reading were conducted in giving instruction to the control group.

The investigators initiated the instruction with 30-minute orientation secession in the computer softwares to ensure flexibility of use in the first session of the study. The purpose of this phase of instruction was to prepare students to do successfully the activities that would be covered within the next sessions. The investigators provided the learners with an overview of the softwares programs, and their procedures, and some general activities dealing with the programs for each group. For example, he showed the learners how to type, how to navigate through the pages by arrow keys, how to listen to the passages, and how to answer the questions. The treatment to the first experimental group was given

through the Tell Me More software, designed by Auralog Company. The program started with a progress chart which included the lessons and the activities on offer. There were different squares in the progress chart which linked to an activity and a lesson. Each of these squares represents a lesson to be covered in each session. Then the teacher walked around to answer questions and assisted when students, who were unable to perform computer work properly. More time was spent assisting lowachieving students. High-achieving students received positive feedback .The intention here was that students who needed help and were too shy to ask questions could receive help without being spotlighted. The same procedures happened to second experimental group which used Sweet English for instruction.

After the teacher went through the passage, students were given a chance to go over the passage by themselves and use dictionary if they wanted. However, compared to the experimental groups the students in the control group could not hear the oral reading by a native speaker or teacher while they were reading by themselves. Instead of computerized dictionaries those students could access traditional monolingual or bilingual dictionaries. The control group's students could not have sound effects when they were doing the exercises, and there was no immediate verbal feedback. Students had to wait until every body was ready, and then the teacher discussed the answers with them. The teacher in the conventional teaching class taught and guided the whole class. Conversely, the teacher in the CALL classes guided the students to go through the passage once, and then the students read the passage again and performed activities by themselves.

The process involved administering a post-test to all groups in order to observe possible differences among the control and experimental groups, i.e. to check the effect of the treatment. The post-test was the same as pre-test. The process involved analysing data and developing a conclusion whether the treatment had any impact on the subjects' reading comprehension. The significance of the difference among the obtained means of experimental and control groups in the post-test was determined through one-way ANOVA. Two days after the post test, only the experimental groups received a fourpoint Likert-scale determine the attitude about the working with softwares. The survey data were analyzed under the descriptive statistic method and T-test method to investigate student attitudes and student perception between student attitudes and student perceptions of learning performance in both environments.

Results and Discussion

Standard error

The reliability of the constructed test with the mean score of 24.20 and standard deviation of 6.42 administered to the pilot study group estimated through Kuder-Richardson, (KR21) formula, estimated to be 0.85. In the next step, the constructed test was administered to the control group, Exp. 1 (Sweet English) and Exp. 2 (Tell Me More) as pretest and after the treatment the same test was administered to all three groups as post-test.

Table 4.1: Descriptive Statistics of Pre-test of Control Group, Exp						
Course	Control	Exp. 1:	Ex			
Groups	Group:	Sweet English	Tell Me N			
Valid numbers	20	20				
Mean	23.25	23.75	2			
Variance	20.20	19.25	1			
Standard deviation	4.49	4.39				

1.00

0.98

As indicated in Table 4.1, the mean score of the pre-test of control, Exp.1 and Exp. 2 are 23.25, 23.75 and 24.30 respectively. It shows that their mean score are relatively similar. Table 4.2 shows that all three groups' mean scores in the post-test are 25.60, 29.10 and 30.95, respectively; the statistics shows that there is a big difference in the mean score of the control group in comparison with that of the experimental groups.

Groups	Control Group:	Exp. 1: Sweet English	Exp. 2: Tell Me More
Valid numbers	20	20	20
Mean	25.60	29.10	30.95
Variance	19.62	27.57	15.21

Table 4.2: Descriptive Statistics of the Post-test of the Control Group,

To find the answer to the first research question which is the impact of independent variable, CALL, on dependent variable, reading comprehension, we can see in Table 4.3 in one way ANOVA that the F is 11.05 with the difference of error 55, so the significance at the level of p (p < 0.05000). This shows that the analysis is statistically significant.

Table 4.3: Descriptive Statistics of Variance of the Applied Strategies Analysis of Variance (Mahdavi Final Test. sta) Marked effects are significant at p < .05000 SS df MS SS df MS Effect Effect Effect Error Error Variable Final Score - Dif. 194.53 2 97.27 501.65 57 8.80 11.05 0.00

Table 4.3 indicates the result of four strategies which the authors applied in the study. The difference score of the first strategy (skimming) the f 3.35 is larger than t critical and the p < 0.0500 it shows that this strategies is in enhanced with software CALL. The same scenario happened in the second strategy (scanning), the f = 9.31 is larger than f critical and the p < 0.0500, it means that this strategy is enhanced in this study. The statistics in this Table about the third strategy (headline guessing) with the f = 1.81 and p > 0.0500 indicates that this strategy does not any improvement in all three group scores. The statistics shown in table 4.5 with the f = 10.68 which is larger than the critical f and p < 0.0500, the fourth strategy (inferencing) is enhanced in this study.

Table 4.4: Descriptive Statistics of Mean Score of the Control Group Analysis of Variance (Mahdavi Final Test. sta)

Marked effects are significant at p < .05000								
	SS	df	MS	SS	df	MS	F	р
Variable	Effect	Effect	Effect	Error	Error	Error		
St1-Dif.	7.03	2	3.52	59.90	57	1.05	3.35	0.04
St2-Dif.	29.63	2	14.82	90.70	57	1.59	9.31	0.00
St3-Dif.	7.43	2	3.72	117.15	57	2.06	1.81	0.17
St4-Dif.	30.10	2	15.05	80.30	57	1.41	10.68	0.00

To notify that which strategy is better enhanced

p. 1 **(p. 2:** More 20 24.30 1948 4.41 0.99

Table 4.7: T-test Results for Exp. 1 and Exp. 2

in this study the authors run a post hoc comparison Tukey test and the Tables 4.6, 4.7 and 4.8 are the results of these tests. Table 4.4 shows the result of the comparison of the mean scores on the first strategy in control group, Exp. 1 and Exp. 2 groups but regards to the research question i.e. the comparison of the two experimental groups. Statistics indicate that the first strategy in both experimental groups gained the same p-value, in both the p > 0.0500 and 0.987 >0.0500. Totally, this means that we can see a progress in strategy 1 but there is no significant difference between the two experimental groups.

Table 4.5:	Descriptive Statistics of Mean Score of the Control Group
	Exp. 1 and Exp. 2

Tukey HSD test; Variable: St1-Dif. (Mahdavi Final Test. sta)							
Marked differences are significant at p < .05000							
	{1} {2} {3}						
Group	M=.65000	M=1.4000	M=1.3500				
Ctrl {1}		0.042	0.049				
Exp. 1 {2}	0.042		0.987				
Exp. 2 {3}	0.049	0.987					

The Table 4.5 shows the result of the comparison of the mean scores on the second strategy in control group, Exp. 1 and Exp. 2 groups but regards to the research question i.e. the comparison of the two experimental groups. Statistics indicates that in the Exp. 2 students got better scores and p < 0.0500 on this strategy in comparison with the Exp.1.

Table 4.6: Comparison of the Mean Scores on the Second Strategy in Control Group, Exp. 1 and Exp. 2

Tukey HSD test; Variable: St2-Dif. (Mahdavi Final Test. sta)							
	Marked differences are significant at p < .05000						
	{1} {2} {3}						
Group	M=.55000	M=.80000	M=2.1500				
Ctrl {1}		0.806	0.001				
Exp. 1 {2}	0.806		0.004				
Exp. 2 {3}	0.001	0.004					

The Table 4.6 shows the result of the comparison of the mean scores on the second strategy in control group, Exp. 1 and Exp. 2 groups but regards to the research question i.e. the comparison of the two experimental groups. Statistics indicate that in the Exp. 2 students got better scores and p < 0.0500 on this strategy in comparison with the Exp.1.

	I							
Tukey HSD test; Variable: St4-Dif. (Mahdavi Final Test. sta)								
Marked differences are significant at p < .05000								
	{1} {2} {3}							
Group	M=.45000	M=1.6000	M=2.1500					
Ctrl {1}		0.009	0.000					
Exp. 1 {2}	0.009		0.032					
Exp. 2 {3}	0.000	0.032						

And also the Table 4.7 shows that the result of the T-test, the mean score of the Exp. 1 is 1.87 and the mean score of the Exp. 2 is 3.25 with p < 0.0500, rejecting the HO. It means that the perception of the Exp. 2 (Tell Me More) is more positive than the Exp. 1 (Sweet English).

Table 4.8: Descriptive statistics of T-test in Exp. 1 and Exp. 2								
Mean Mean t-value df Valid N Valid N Std. Dev. Std. De						Std. Dev.		
Variable	Exp.1	Exp.2			Exp. 1	Exp.2	Exp. 1	Exp.2
Attitude	1.87	3.25	-15.23	38	20	20	0.35	0.20

Results and Discussion

With respect to learning conditions, conventional learning vs. CALL, results indicate that the use of CALL in EFL instruction facilitates reading comprehension to a considerable extant. Two possible reasons for the more successful learning of the experimental groups are: First, the use of CALL, which during instruction enhances input comprehensibility. In other words, exposing students to a real-life sound- picture association of words approach (CALL soft ware) give learners the chance to experience language in real life situations and learn language through experience rather than language through language. This conclusion is in agreement with Krashen's (1982, 1985) Input hypothesis discussed in chapter II. Second, the use of CALL during instruction makes learner actively rather than passively involved in the learning process. That is the learning environment created through the interaction between learners and the computer and learners and their classmates. Moreover, the feedback the learners receive from the computer, coupled with comprehension checking activities lowers down learner affective filter (Krashen, 1981, 1982). The findings of the present study are consistent with some of the researches that were conducted to help learners develop reading comprehension through CALL. For example, indicated an overall positive attitude toward the Tell Leloup & Ponterio (2003) conducted a study on the Me More. A significant correlation was reported use of CALL to improve reading skills emphasizing between student attitudes and students perceptions. the use of glossaries and vocabulary acquisition. Two possible reasons for the more successful They concluded that in both areas, students using learning of the experimental groups are: first, the use computer technologies to assist them in of CALL during instruction enhances input comprehending reading passages and identifying comprehensibility. In the other words, exposing vocabulary, outperformed control groups of students students to a simulated real life sound-picture who did not have CALL assistance available. Brett association of sentences approach gives learners the (1996) did a research in which he gave evidence that chance to experience language in real-life situations CALL soft wares are more motivating and attractive and learn language through experience. Second, the for learners than the traditional books and tapes. use of CALL during instruction makes learners Also James Wong () claims, on the basis of his actively rather passively involved in the learning research, that students are generally positive about process. That is, the learning environment created the use of computers for language learning .Wong through interaction between learners and computer, did his research during a course with an intensive and learners and their classmates. Moreover, the focus on reading comprehension for academic feedback that learners receive from the computer, purposes. However, the findings of the present study coupled with comprehension-checking activities, reject Haddad's findings. The results of his Ph.D. lowers down the affective filter of learners (Krashen dissertation suggest that CALL and traditional 1982). methods did not differ in developing reading comprehension in EFL classes. Also in a study by Acknowledgment Robinson (1991) investigating students' attitudes on The authors wish to thank Dr. Amir Marzban for his thoughtful comments and helpful suggestions on a CALL program, it was found that even students who were most enthusiastic about CALL look earlier versions of this paper and Dr Hasan Karimi for the statistical analysis of the obtained data. forward to returning to the classroom by the end of the study. By the end of the study it was concluded that students who work exclusively with a CALL References program began to feel isolated from the traditional Brantmeier, C. (2003). Technology and second classroom environment and missed the more language reading at university level: Informed traditional setting. instructors' perceptions. The reading Matrix, 3 (3). http://www.readingmatrix.com/articles/branmeier/a rticle2.pdf

Conclusion

To summarize the findings of this study in terms of the research hypothesis, the result of the study presented in the previous chapter confirm the hypothesis that students who receive CALL scored higher on the post test than the students who received conventional teaching, with respect to learning conditions, conventional learning vs. CALL, result of the study indicate that the use of CALL during instruction facilitates reading comprehension to a considerable extend, and the result of survey

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